



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Journal of the Society of Arts.

FRIDAY, FEBRUARY 20, 1863.

THE SOCIETY'S MEMORIAL OF THE PRINCE CONSORT.

The following circular, with an abstract of the proceedings of the General Meeting held on the 7th inst., is now being issued to the members:—

Society of Arts, Adelphi, London, W.C., Feb., 1863.

SIR,—I am directed to bring to your notice the subjoined proceedings of a Special General Meeting of this Society, held on Saturday, the 7th instant.

Should you desire to have your name placed on the list of subscribers, I shall feel obliged by your filling in the accompanying paper, and returning it to me, with your subscription, which may be in the form of a post-office order or cheque, made payable to the Financial Officer, Mr. Samuel Thomas Davenport, and crossed Coutts and Co.

I am, Sir, your obedient servant,

P. LE NEVE FOSTER, *Secretary*.

The subscription of each member is limited to one guinea.

WOOD CARVING.

EXHIBITION AND OFFER OF PREMIUMS.

The Council have had under consideration a communication from the Society of Wood Carvers, asking the aid of the Society of Arts in promoting the art of wood carving in this country, and they have agreed to allow the use of the Society's rooms for the purpose of holding an exhibition of wood carving, both modern and ancient, in the month of June next. The Council have further agreed to offer the Society's Silver Medal and to make a grant of £30, the Society of Wood Carvers giving £15, as a fund for prizes to be awarded to the most meritorious exhibitors on that occasion, in the following divisions, thus:—

FIRST DIVISION.

Human figure in alto or bas relief. Animals or natural foliage may be used as accessories.

1st Prize of £8 and the Society's Silver Medal.

2nd Prize of £4.

3rd Prize of £3.

SECOND DIVISION.

Animal or still life. Fruit, flowers, or natural foliage may be used as accessories.

1st Prize of £8.

2nd Prize of £4.

3rd Prize of £3.

THIRD DIVISION.

Natural foliage, fruit, or flowers, or conventional ornament in which grotesque figures or animals may form accessories, preference being given where the work is of an applied character for ordinary decorative purposes, as representing commercial value.

1st Prize of £8.

2nd Prize of £4.

3rd Prize of £3.

Employers or private owners may be Exhibitors, but *bonâ fide* workmen only can receive Prizes.

The Judges will be selected as follows:—

Four by the Council of the Society of Arts, and three by the Society of Wood Carvers.

ELEVENTH ORDINARY MEETING.

WEDNESDAY, FEBRUARY 18, 1863.

The Eleventh Ordinary Meeting of the One Hundred and Ninth Session was held on Wednesday, the 18th inst., J. B. Smith, Esq., M.P., in the chair.

The following candidates were proposed for election as members of the Society:—

Caddick, Edward	West Bromwich.
Eastham, Silas	7, Market-street, Manchester.
Hartley, John Galley ...	22, Craven-st., Strand, W.C.
March, Richard Alfred ...	7, John-street, Adelphi, W.C.

The following Candidates were balloted for and duly elected members of the Society:—

Castriota Skanderbeg,	} 3A, King-street, St. James's, S.W.
H.R.H. Prince Georges, des Rois d'Epire et d'Albanie	
Chatfield, Charles	} Broad Green House, Croydon, S.
Ferguson, James	
Machaffie, David	} (Messrs. John Pender and Co.), Manchester.
McKay, Dr., M.D.	
Piggott, Wm. Peter	} Castle-street, Inverness, N.B.
Pouncey, John	
Rae, John, M.D.	} 21, Brompton-square, S.W., & 4, Fenchurch-street, E.C.
Rowland, John A.	
White, William	} Belmont, Upper Norwood, S.
	} 2, Waterloo-place, S.W., and Forest-hill, Sydenham, S.E.

The following Institution has been received into Union since the last announcement:—

Ely Mechanics' Institute.

The Paper read was—

ON THE BEST MEANS FOR PROMOTING THE GROWTH AND IMPROVING THE QUALITY OF COTTON IN INDIA.

By A. NESBITT SHAW.

At a season when thousands of our countrymen are famishing for the want of a medium of exchanging their honest labour for their daily bread, no man, however incapable he may be of doing justice to a great national question, need fear standing before a British audience to advocate the cause of our distressed population, by inviting a discussion on the best means of promoting the growth, and improving the quality, of cotton in India, with a view of alleviating the pressure of a calamity such as that now casting a gloom of despondency over the country, and averting the recurrence of a crisis which the course of events had long shadowed forth before it suddenly exploded, scattering misery and ruin throughout our manufacturing districts.

The first consignment of cotton to this country from the United States occurred in 1784, on which occasion eight bags were introduced into Liverpool, and these were seized by the custom-house officers, under the impression that cotton was not produced in America; and as late as the year 1791, when cotton was extensively cultivated in India, the exports from America amounted to only 189,316 lbs. In India, at that time, the East India Company enjoyed a monopoly of the trade, but it would be fruitless to speculate on what might have been the effect had that Company, in its combined capacity of merchant, proprietor of the soil, and ruler of the State, given its serious attention to the developing the resources of the country. The Government of India had its commercial agents in the cotton-growing districts, whose duties led

them no further than to contract with the native dealers for the necessary supply of cotton required as an investment to China, there to be bartered for tea. No attention was bestowed, or attempted, on improving the quality of cotton, or of introducing any of the appliances for preparing it for the market. The native merchants executed the commercial agents' commission, and as the cotton was furnished so it was shipped to China, and delivered to recognised dealers only, who were licensed to deal with Europeans, who priced it, caring little about its quality or impure condition, and exchanged it, at its real value, for teas destined to be disposed of in London at the periodical sales of the East India Company; hence, in India an organised and seemingly legalised system of fraud and adulteration became a part and parcel of the cotton trade.

The Americans, a shrewd and intelligent people, were not inactive spectators of our proceedings, and while our Government in India, with the monopoly of the trade in its hands, the cheap labour of the country, and its many other advantages, was doing nothing to promote the cultivation or to improve the quality of the cotton, the Americans, by a steady and persevering attention to these matters, gradually extended their cotton trade, and obtained, nearly to the exclusion of India, a complete possession of our markets, a position that America will regain, and ever must hold, so long as the staple of Indian cotton is inferior to that of the Southern States; and, however desirable railways and improved modes of transit and communication may be in India—and no one either doubts or denies their utility—they are, as far as cotton is concerned, substituting the effect for the cause. It is, therefore, unreasonable to expect that the cultivators of India will expend their labour and capital in greatly enlarging their cultivation to produce cottons which are unable to enter into competition with those of American growth, and for which a precarious and fluctuating demand only can exist, to be regulated by the supply depending on causes over which they have no control, and altogether ceasing in seasons of abundance and plentiful harvests in other countries.

The question then is:—"Can India compete with the United States of America? Can India produce that quality of cotton in sufficient quantities of the ordinary descriptions grown in America, which is so extensively required in our manufactures?" It had been long felt that this question must arise, and that the time could not be far distant when it would have to be fairly and maturely considered, but it was not until after the abolition of the trade monopoly that the East India Company—perceiving that it had allowed its opportunity to pass, in having neglected to improve the cotton cultivation, when it had the whole matter in its hands—became alive to the mistake committed, and then, with the best intentions, instituted many experiments for the purpose of retracing its steps; unfortunately, one and all of these attempts ended in disappointment, each having in its turn been prosecuted and abandoned, and not until the year 1842 did any experiment holding out a prospect of success appear. The President of the Board of Control, in July, 1856, thus describes it in the House of Commons:—"That in Dharwar the American cotton had taken so firm a hold that nothing was required to assist it, but that it had failed everywhere else;" yet, strange as it may seem, when so many large and expensive experiments had been injudiciously prosecuted, with a zeal which did credit to the Government, this, the only attempt in Dharwar which had ever been remunerative or held out the hope of success, and the merit of which had been acknowledged by the Government, has met with so little favour from those in authority, and has never been made a basis for promoting the cultivation or improving the quality of the cotton of India in other districts.

The rebellion in America having at length exposed to our view the volcano upon which we had been resting, compelled us in our difficulties to turn to a country which

in our prosperity, we had neglected; and that able and lamented statesman, the late Lord Canning, appreciating the deplorable position of the manufacturing interests now so dependent on India, required, previously to resigning his office as Governor-General, that a treatise should be published, setting forth the result and condition of the cotton experiments in India, urging that "an imperfect compilation, which might be available within the next six months, would be far more useful than one which thoroughly exhausted the subject, but which could not be published in a year hence."* Confining my observations chiefly to the Bombay Presidency, had there been no conflicting differences of opinion, had the subject been one of trivial importance, or had the sentiments of those who had most loudly proclaimed that India was wholly incapacitated from producing exotic cottons, not been proved erroneous by the palpable fact at Dharwar, there might have been reason in Lord Canning's directions; but, seeing that facts were daily disproving old theories, it was obvious that a compilation which did not exhaust the subject was a work of supererogation, calculated to do no good, but rather to discourage those schemes which were in progress to improve exotic cultivation; and it might, therefore, have been more judicious not to have published any book than to have presented to the public an imperfect analysis, that revived an agitation on past theories, decided nothing, and reproduced a discussion on a matter upon which subsequent events are now eliciting results, contrary to the conclusions of that or any other compilation from the records of the government, which merely related a history of the lamentable failure of a series of ill-conducted and ill-selected experiments. It must, moreover, be remembered, that the gentleman chosen to make this compilation, does not speak the language of the country, that he did not visit the cotton districts, that he had no opportunity of making personal inquiries, but that he was simply required hastily to compile a treatise, and to draw his conclusions from the documents placed at his disposal; so that, if the evidence was erroneous and faulty, which is the point I hope to establish, it followed that the conclusions based on that evidence would be imperfect and incomplete.

Previously to the year 1842, extensive experiments, by the means of experimental farms, had been undertaken in many parts of the Bombay Presidency; these had all failed, and nowhere more prominently than in Dharwar; yet a subsequent attempt in Dharwar, conducted on an altogether different principle, had succeeded. This is a fact, establishing a flaw in the evidence, upon which the whole presidency had been convicted.

By its own showing, up to the 29th of April, 1843, the government of Bombay held precisely the same sentiments as those promulgated by its authority in 1862, saving that, with the fact before its eyes, it is admitted that exotic cottons may be successfully cultivated to a limited extent in the southern parts of the Presidency; this limited approbation is not defined, and if we may be permitted to extend it beyond the conventional boundary of the southern parts of the Bombay Presidency to the southern portions of the British territory, we at once obtain an area, if not more extensive, little inferior in extent to the cotton cultivation of the whole of the Southern States of America.†

* Resolution of the Government of India, dated 22nd July, 1861.

† The quantity of land in the regions enumerated (in the Southern Peninsula of India) amounts to many thousands of square miles. Taking the four Southern Provinces, Coimbatore, Salem, Madura, and Tinnevely, Dr. Wight estimates these at 4,000 square miles, a mere fraction of India, which might and would annually be under cotton culture in the event of a rise in the price of a farthing per pound.—[Dr. Forbes Watson's paper, read before the Society of Arts, March 23rd, 1859.] The Southern Mahratta, comprising the Dharwar Belgaum, and the Bellary, Guntoor, Cuddapore, and Mangalore collectorates, including the alienated lands not under government assessment, does not contain less than 60,000 square miles.

In a despatch from the Bombay government to the Honourable Court of Directors, dated the 29th of April, 1843,* the government of Bombay recapitulates a long catalogue of expensive experiments, which had been pursued through a series of years in Dharwar, showing that no part of India had received so much attention, nor had such extensive experiments been elsewhere conducted for the purpose of improving the cotton cultivation, yet all had been in vain, and Dharwar Cotton, in 1843, known as Compta, was the lowest priced and the worst in the market. In the year 1861, this same district contained 280,000 acres of American cotton, of which 178,000 acres were growing (according to the diagram prepared and published under the sanction of government), on ordinary Ryots fields, assessed by the collector, and the remainder on alienated lands. The cultivation of the indigenous cotton during the intervening period continued nearly stationary, and it is a circumstance worthy of grave consideration, that owing to the proximity of the growth of these two cottons (the value also of the exotic, leading to its being wilfully adulterated with the indigenous), both cottons have become hybridized, and that although this effect may have lessened the value of the New Orleans, which still† maintained its position at the head of the price current, being on the 12th of November, 1862, 150 rupees per candy, higher than the best cotton in the Bombay market, it had raised the Compta, or indigenous, to an equality with the Broach and Surat cottons. Allowing that it requires seven acres of the New Orleans seed to produce a candy, or 784 lbs. of clean cotton, and that thirteen acres of the indigenous cultivation are necessary to yield an equal amount (the relative prices of the New Orleans and indigenous cottons being as quoted in Bombay at the above date, 560 rupees and 390 rupees per candy), the difference of the value of 280,000 acres of these respective cultivations, taking the rupee at two shillings, would be as £2,240,000 to £840,000, leaving in favour of the New Orleans £1,400,000, to be divided amongst those concerned in India in growing and selling the crop, and manifold more valuable to the Government and country than the whole aggregate of the expenditure which has been incurred in all the experiments throughout India. This might teach those who disparage every attempt to promote the growth and improve the quality of Indian cotton, that if Dharwar, a district formally abandoned as altogether incorrigible, a

* In saying that in respect to cotton cultivation the Southern Mahratta country had been neglected, &c., we intimated to Mr. Shaw that he had very inconsiderately made a statement which the least inquiry would have shown him was incorrect. He had overlooked, as we observed to him, the fact that for a series of years (from 1830 to 1836) extensive operations were carried on in cotton farms at Segee Hullee and other places, which were plentifully supplied with exotic seeds, while an agency was established for the purpose of purchasing cotton from the ryots in the eastern districts, and several cotton packing presses were erected at Dharwar, Nowlgoond, and Gudduc, all under the superintendence of Dr. Lush, with the view of promoting improvement, not only in the quality of the cotton produced, but also in the mode of cultivating, gathering, picking, cleaning, and packing it in the Southern Mahratta country. We did not deem it necessary to enter into the causes of the failure of the measures in question (nor is it requisite to do so here, as your Honourable Court is in possession of full information on the subject) but we considered it right to intimate to Mr. Shaw that, had he consulted his records, or the public servants on his establishment, he would have learnt that those measures were persevered in as long as a hope remained of effecting by their means the objects in view, and that nothing could be more unfounded than his statement of the Southern Mahratta country having as regards its cotton cultivation, been neglected by government.

† Bombay price current, dated 12th November, 1862, Cotton per candy, of 784 lbs.

Broach and Surat	360 to 375 Rupees
Dholera	405 to 410 "
Omrawattee	365 to 375 "
Mangalore	365 to 375 "
Compta	388 to 390 "
Dharwar	558 to 560 "

district in which more experiments had failed than in any other part of India, has subsequently succeeded—that if those measures which had ultimately proved successful in Dharwar had been zealously and perseveringly pursued in other localities, they might have possibly, in those other localities, produced the same results. May we not, therefore, fairly and logically deduce that if the facts upon which the Government arrived at its conclusions were overruled in one place, it is yet to be shown why they are to be accepted as conclusive and correct, under exactly similar circumstances, in all other places.

Examining the reasons upon which the Bombay government pronounced the cotton experiments to be a failure, we find on the public records in an official despatch, dated the 7th of January, 1836, from the late Sir Robert Grant, "That the cotton experiments would not succeed in the Southern Mahratta country, and that the revenue commissioner had made it equally clear that they would not succeed anywhere else," and, subsequently, Sir Robert adds, "that the experiments had been sufficiently tried and failed."* That every attempt to improve the cotton cultivation in the Southern Mahratta, previously to 1842, had conspicuously failed, is undeniable, and by this decree of Sir Robert Grant's, Dharwar, with the rest of the Bombay Presidency, is condemned; Sir James Carnac, who succeeded Sir Robert Grant in the government of Bombay, confirms his predecessor's decision, and assigns his reasons. He states that the experiments had failed because "dirty cotton gave a better return than clean."† Here we have a concise and intelligible view of the question. All experience has shown, without going to India for instruction, that one considerable impediment which has ever stood in the way of effecting reforms, has been, that the continuation of a fraud or abuse has been more profitable to those concerned than the introduction of measures which would check or suppress those practices. From the days of the East India Company's monopoly, the indigenous cotton had been largely and systematically adulterated, and the native dealers in cotton required no one to explain to them, that if a new cultivation was introduced under the auspices and protection of the revenue servants of the district, (provided those public servants understood their duty) wholesale adulteration and fraud must cease; consequently, while we may easily imagine that an innovation of this description would be strongly opposed, and that it was profitable to practise fraud by which dirty cotton was made to pay better than clean, we may not so readily apprehend the procedure of the Bombay Government, in neglecting to take decisive steps to suppress those acknowledged abuses, which were destroying and did destroy a great national undertaking of the largest importance to the commercial interests of both India and Great Britain; for if the good old adage of honesty being the best policy was to be reversed, and dirty cotton was to pay better than clean (and this with the apparent sanction of the government), it would be hopeless to expect that ryots and dealers would sacrifice their individual interests for the public good.

The success of the American cotton cultivation in Dharwar invited renewed exertions to be commenced in Belgaum; and in March, 1850, Mr. Reeves, the collector of that district, reports to Government, "that the New Orleans cotton of Belgaum is in no way inferior, as far as he can ascertain, to that of Dharwar." But, he adds, that the ryots are ignorant, possessing little enterprise, and obliged to trust to the native dealers, who will have nothing to do with it, although he had published through the district the value of the cotton.‡

Mr. Reeves is succeeded by a new collector, who, soon after entering on his duties, expressed an unfavourable opinion of the exotic cotton, attributing its failure in Belgaum to two causes. 1st. "That it is due to its in-

* Revenue Consultations, 1836.

† Page 27 of Compilation of 1861.

‡ Revenue Consultations of 1850.

ferior yield." 2nd. "That, except as an irrigated crop, it will not thrive."*

In regard to the first of these reasons, it is wholly contrary to the result of experience at Dharwar, where, in the year 1844, after a careful analysis, the New Orleans was found to yield from 350 to 400 lbs. of cotton in the Southern Mahratta country per acre; the indigenous, or native, only 220lbs.; the New Orleans also rendering one-third wool to two-thirds seed, the indigenous giving but one-fourth wool to three-fourths seed. Mr. Haywood also, in a letter to Mr. Platt, of Manchester, published on the 1st of February last in the "Cotton Supply Reporter," states the yield of the New Orleans, in the Southern Mahratta country, at 672lbs. seed cotton per acre, which, with better cultivation, might be improved, and that "the native seed only produces half the quantity obtained from the American." For the relative value of these cottons, taking a given quantity of each, I refer to the price current to which allusion has already been made. Whatever may be the scope for conjecture with regard to the yield of the New Orleans, there can be none as to the second cause of its failure in Belgaum, namely, that it will thrive only as an irrigated crop, for, fortunately, the diagrams published by Government decide this question.

The American cotton in Dharwar was never irrigated. We learn also, from the official returns, that the average fall of rain in Belgaum† (rain falling in every month in the year save February), was 46 inches 64 cents., while in Dharwar, the same diagram gives an average of 31 inches 39 cents. Again, referring to these returns, we find the range of the thermometer in Dharwar always to be higher than that of Belgaum, so that the moisture of Belgaum exceeds that of Dharwar, where the New Orleans has succeeded with no irrigation.

On examining the official return‡ of the cotton cultivation of Belgaum, two coincidences appear; first, that the effect of the unfavourable opinions of the local revenue officers was followed by the almost total annihilation of the American cotton culture in 1853; and, secondly, that in 1860 it spontaneously revived before the American difficulties had given an impulse to the cotton trade in India, and at a moment when the indigenous cotton culture in the same collectorate fell off to the extent of 43,388 acres, and that the whole of this revived cultivation occurred in the two talooks of Bedamee and Hoongoond, which a reference to the map will show are the most eastern divisions of Belgaum, and, consequently, the hottest and driest, but, at the same time, adjacent to Dharwar; from whence, probably, the ryots of Bedamee and Hoongoond learnt their experience of the relative value of the respective cottons.

The collector of Belgaum alluded to was an officer of the highest reputation, who has filled with credit and honour some of the most important posts under the Bombay Government. He most unquestionably spoke his convictions; and however he may have formed these convictions, however contrary they were to the facts adduced to support them, he spoke as he believed, probably never having seen a field of American cultivation, or having obtained his information from his native subordinates, who had no inclination to trouble themselves with an additional duty, or from those native dealers whom his predecessor, Mr. Reeves, had reported as having set their faces against the introduction of the American cotton, and who "would have nothing to do with it."

In 1842 the experiment was commenced in Dharwar, not under the auspices of government, but on an entirely new principle, under the influence of the collector, taking the ryots as he found them, and gradually inducing them to adopt improvements. In 1843, the second year of the Dharwar operations, some samples of the New Orleans,

and of the indigenous produce, were forwarded for the opinion of the Bombay Chamber of Commerce, and here the experiment, early in its proceedings, met with discouragement, the Chamber of Commerce pronouncing that the native cotton was longer in staple and the most valuable cotton.* In the sixth year of the experiment the cultivation of the New Orleans, which was ever sensitively affected by adverse opinions too readily circulated through the country to its disadvantage, at once fell off from 20,502 acres to 3351,† the cultivation of the indigenous cotton at the same time slightly increasing. The New Orleans, however, in two years, recovered itself, and its cultivation has since gone on steadily advancing, extending by the last official accounts of 1861-62, over 200,000 acres.

Incomprehensible as it may be to understand how the Bombay Chamber of Commerce, at the very outset of this experiment, had formed its unfavourable opinion of the American cotton, it may be more unintelligible to rightly appreciate a subsequent judgment of the merchants of Bombay. In the year 1847, for the purpose of testing the respective value of the New Orleans and native cottons, it was determined by the Bombay government to sell by public auction several hundred bales of each description. Here again public opinion or prejudice was completely against the exotic, the result of these sales was most unfavourable to the New Orleans, the indigenous cotton realising a considerably higher price. This was a humiliating dilemma; as there was no gain-saying the honest opinions of the merchants, which they had freely backed with their money, all further discussion on the matter seemed to be closed. It was, however, destined to be otherwise. These rival cottons were fortunately both consigned to England, and fated to meet again at Liverpool, where a very different verdict was recorded; the New Orleans there sold for 6½d. per lb., the indigenous for 3½d. This was a most narrow escape, for had either of these trial cottons been shipped to China, or elsewhere, or had they not fallen into the hands of those who were competent to determine their respective values, the fate of the New Orleans, frowned on as it was by the district officials, depreciated and undervalued by the Chambers of Commerce and the mercantile community, would have been sealed for ever. It has never been explained how it was that the merchants of Bombay and the Chamber of Commerce were so lamentably mistaken; it is true that many of the gentlemen composing these associations have never seen a cotton field, and know little of the practical uses to which cotton is applied, and the only reasonable inference is that they were influenced by prejudices, and by certain reports made to the government, under dates of the 28th of November and 12th of December, 1846, in which the opinions of the American planters, who attended the sales in Bombay on the eve of their finally quitting India, were quoted, stating that it was a mistake on the part of the government attempting to introduce the American varieties of cotton into India, observing, to use their own words, "That the staple of the cotton of Western India is as long as that of the New Orleans, and equally as strong, and it is erroneous to suppose that the introduction of the American varieties could be attended with any benefit to India."‡

The result of the sales at Liverpool determined the relative value of the indigenous and American seed cottons grown in India, but there is a stronger testimony in favour of the latter, in the evidence of Mr. Aspinall Turner, the representative of Manchester, who was examined be-

* Revenue Consultations, page 179.

† Pages 242 and 244 of compilation of 1861.

‡ Page 124 of Compilation of 1861.

* Page 133 of Compilation of 1861, and Revenue Consultations of 1844, page 155, containing the collector's reasons for dissenting from the opinion of the Chamber of Commerce.

† Diagram of cotton cultivation in Dharwar, page 160 of Compilation of 1861.

‡ Official Records of Dharwar Collectorate, containing reports of the American planters employed in that district before finally leaving India.

fore a Committee of the House of Commons, in 1848.* This gentleman, a practical manufacturer and consumer of Indian cotton, purchased at Liverpool some of the American seed grown in India, valued at 6½d. per lb., and tried it, weight for weight with ordinary Orleans, which cost 6½d. per lb., and the result was that the Indian New Orleans produced three per cent. more yarn than the American, and of equal value.† It behoves the British public, therefore, to receive with caution opinions, however honest and disinterested those opinions may be, which emanate from Indian officials, or even members of the mercantile community or Chambers of Commerce in India, on subjects of the details of which they must necessarily have but a very limited knowledge; and, with the partial and imperfect success of the Southern Mahratta in view, bold must that man be who will deny to the southern parts of the Bombay and Madras Presidencies either the capacity or ability to produce the ordinary American cottons of quality and quantity sufficient to supply our wants.

No allusion has yet been made to either Scinde or to the Deccan or Goojerat, extensive provinces of the Bombay presidency, itself only a fifth part of the British Indian Empire.

In regard to Goojerat, a district containing between eight and nine thousand square miles, the most ancient cotton-producing field in India, the government records are loaded with adverse opinions—"The trials at Ahmedabad to be like so many former experiments, a costly failure."‡ "That if the ryots are left to themselves and no unhealthy stimulus is applied, the New Orleans will soon cease to be cultivated."§ In Broach the government saw-ginning establishment was broken up, because no one would use their gins. At Surat the saw-gins set up remained idle. Gloomy and dismal as the official accounts are from Goojerat, I can detect no serious cause for alarm. I cannot observe that any one of the revenue officers displayed any extraordinary zeal or interest in the matter, their time being fully occupied by their magisterial and revenue employments; they looked upon the operations of growing or cleaning cotton as an altogether novel and imposed duty, interfering with their proper and legitimate functions. No attempts were made either to induce the ryots to undertake the exotic cultivation, or to bring it into favour; the process of endeavouring to improve the indigenous plant or to acclimatize the exotic seed, was never seriously considered. An amount of exotic seed supplied by government, whether New Orleans, Egyptian, Bourbon, or Sea Island, or other variety, was distributed without regard to its peculiarity to subordinate native servants, and sown without attention to locality or climate. Sanguine, indeed, must the practical agriculturist have been who could, under such circumstances, have expected to reap a harvest, and little must that man

* I have been a large consumer of Indian cotton for many years, and know the cotton pretty well; it has been a very uncertain supply. When American cotton has been selling at a low price in the market, we have not had an adequate supply of Indian cotton, and when the American has been selling high in the market the supply has increased. I am satisfied, and have been for many years, that the supply of Indian cotton never will be regular until it assumes something like the quality of the American cotton. If we can obtain it from India of a quality a penny a pound more than the Indian cotton generally sells for, so as to enter into competition with the American cotton for all common purposes of spinning, I have long been satisfied that a great revolution would take place in the Indian cotton trade, for it would, instead of being a fluctuating supply, be a constant and regular one; the grower of cotton in India, if he could improve his quality, would be able at all times to compete with the American grower, and an immense supply would be obtained from India, obviously for the advantage of both countries.

† Speech of J. B. Smith, Esq., M.P., in the House of Commons, June 19, 1862.

‡ Revenue Department Compilations, No. 110, 1861.

§ Revenue Consultations of 1848, pp. 139—172.

have understood of the character of the natives of India who hoped to overcome their prejudices, and induce them to countenance an innovation under such auspices. I feel confident that if the system adopted in Goojerat had been attempted in Dharwar in 1842 (little as has been done there, and neglected as that little since has been) the result of the Dharwar undertaking would have issued in as signal a failure as those experiments which preceded it in that district, and followed it in Goojerat.

In the concans no cotton cultivation exists, and it is only necessary to say a few words in regard to the Deccan. In the collectorate of Sholopore the experiments were not extensively tried, the natives refused to buy cotton cleaned by saw-gin, assigning as their reason, that it *so* cut the staple "that the thread spun from it was found to lose all its usual strength." The area of land, according to the official return,* capable of producing cotton in Sholopore is estimated at 2,552,575 acres, of which only 180,600 are under indigenous culture.

Khandaish, according to the late revenue survey reports, contains an area of 12,078 square miles, of which, after deducting for unarable hills, rivers, roads, and villages, 2,306 square miles, there remain 9,772 square miles capable of cultivation, 8,359 of which are waste. In this collectorate in the year 1850-51, there were 7,670 beegahs of American cultivation, regarding which, the American planter in the month of June in that year writes, "He had never seen in India plants so vigorous and healthy-looking." In July he adds, "I never saw better cotton fields in India, they are equal to Louisiana." In August he reported the plants at Chopra and Yawul, which were irrigated in May, "to be in a most luxuriant and promising condition," and that if the whole of Khandaish had been treated in a similar manner, the collectorate "would have been equal to the finest province in the United States;" but he concludes by fearing "the greatest danger is the continuation of the rains." Well, the whole of these brilliant prospects ended in nothing, and the collector subsequently reported that the "excessive luxuriance of the plants and late rains caused the first ripened pods on the lower branches to rot off" and the caterpillars and insects destroyed the rest.† Here, by the collector's own showing, he lost his crop, by the early sowing and irrigating in May. He knew the rains would commence in June and continue till September; had he delayed his sowing (whatever might have been the fate of his crop), he would have saved the early irrigation, and escaped the attacks of the insects and flies, which always prevail immediately at the close of the rainy season, and in all probability he would have gathered an excellent harvest in February or March, or, if even in the month of August (when the planter himself became apprehensive that he had too much forced the cultivation), had he pruned the plants and thus retarded their luxuriance, and counteracted the error, which he began to fear he had committed, he might have preserved his whole crop.

Scinde, from its climate and geographical position, has been compared to Egypt. Colonel Rathbone, an intelligent officer, who was many years employed in a civil capacity in Scinde, writes, "There can be no doubt that the natural fertility of Scinde is pretty equal to that of Egypt. As far as I could judge (and I passed nearly two years in Egypt) the soil is identical; both are in almost the same latitude; both have about the same climate; both produce the same plants and trees, quadrupeds, birds, and fishes; the geographical formation in both is the same, the features in each resembling those of the other in a manner almost ridiculous." Cotton cultivation was only introduced into Egypt by Mahomed Ali in 1821; and in 1859 that country exported cotton to the declared value of £1,113,419, while every attempt to introduce the American varieties of cotton into Scinde has failed. In 1856, Sir Bartle Frere, speaking of the exotic cotton cul-

* Revenue Department, No. 1,169 of 1861.

† Page 93 of Compilation of 1861.

ture in Scinde, says, "That in many places the soil is well adapted for the luxuriant growth of the plants, and that the ravages of insects are the only evil for which a remedy has to be discovered."* Yet Scinde, in 1861-2, did not produce one plant of exotic cotton, while Egypt, with all its plagues of flies and insects, was a large exporting country.

Whether it be profitable or feasible to employ irrigation in growing cotton is not the inquiry. The most valuable varieties of the cotton plant are generally perennial and suited to moist climates, and would, with the judicious aid of irrigation indubitably in India yield two or three pickings in the year. But a system of cultivation, which in one locality may be attended with complete success, may obviously not be adapted to another, as different descriptions of exotic plants require different modes of treatment. Neither does it follow that the longest or most valuable staples are the most profitable crops to cultivate. Nothing, therefore, but a practical knowledge and experience can determine the best course to be prescribed. The ryot may be a creature of habit, adverse and opposed to innovations, content with things as they are, and for these reasons, in order to improve him, we must commence by taking him as we find him, gradually leading him to adopt those changes which, we are quite sure, will benefit him. Our experimental farms, often superintended by persons wholly ignorant of any system of agriculture, as well as of the language, habits, and prejudices of the people, conducted on an expensive scale, at once alarmed the ryot. We are now running into the opposite extreme, and because our experimental farms were completely unsuited to the genius of the native, we are proclaiming, and at a time that we, in England, are daily introducing improvements, that the ryot, as a cultivator of the soil, has nothing to learn. But let an instructor be patient and reasonable, let him be competent to discuss face to face with the ryot, to hear his arguments pro and con, and either satisfactorily refute or confirm them, and he will find, while he is imparting much useful knowledge to the ryot, which the latter will readily and cheerfully receive, that he may himself also learn something; that the ryot is a rational creature, fully apprehending his own interests, not inclined to try experiments he does not comprehend, but ever willing to adopt measures when he sees they are for his benefit. If, then, in the place of expensive experimental farms, the ryots amongst themselves could be induced to see the advantage of keeping their seed pure, acclimatising the most useful description of exotics, hybridizing and improving the indigenous plant, the use of different manures, and the value of exchanging seeds; and if here and there a few intelligent ryots were selected by the local revenue officers for these purposes, and judiciously coaxed to adopt certain views, a popular system of improvement would be introduced, and its advantages would soon be recognised and extend throughout the country.

On the authority of Dr. John William Mallet, who has recently published a learned treatise on the chemical, geological, and meteorological conditions involved in the successful cultivation of cotton, giving an account of the actual conditions and practice in America,† we are told that the physical properties of the soil and subsoil of Alabama, the best cotton field in the States for the green seed plant, appear to be very similar to those of the best cotton soil in India.‡ Speaking also on the chemical

analysis of cotton soil and subsoil, he remarks, that in this respect the Alabama specimens resemble many of the Indian soils analysed for Dr. Forbes Watson. The abundance of practical information contained in this volume is too extensive to repeat here. Dr. Mallet points to the resemblance between the black cotton soils of America and those of India, as regards the total amount of moisture contained * in them; he explains the use and necessity of manures, which in India are wholly neglected, and he concludes by saying, that the cotton plant "can bear both great heat and a considerable amount of moisture," and that, "when other crops, including the Indian corn, are drooping under the blazing sun, the large succulent leaves of a cotton field but seem to enjoy the congenial temperature."

The area of the Bombay Presidency, exclusive of Scinde, is about 90,000 square miles, and casting out of the calculation the protected native States and alienated lands within its boundaries, and omitting those collectorates in which no cotton is produced, the amount of land, according to the official returns,† cultivated in the year 1860-1, was 18,283,316 acres, of which 1,409,045 were growing cotton. There is no correct statement of the returns of cultivation in the protected independent States, but, estimating the alienated lands, whether service or otherwise, within the limits of the Presidency, as at one-third of the amount of the Khalsat or government assessed lands, which are cultivated in pretty much the same proportion as government lands, the cultivation of the Presidency (still omitting the independent States) may be considered about 25,027,609 acres, 1,998,882 of which were producing cotton.‡

To enter on a description of the numerous land tenures prevailing in India, upon each of which volumes have been written, would be obviously out of place; but as all these systems more or less partake of the zumeendaree or ryotwaree, it may be sufficient to observe that the zumeendar is a landed proprietor, who may be solely, or combined

* Page 164.

†	Amount of land in cultivation.	Cultivated with cotton.	Area of collectorates producing cotton, in square miles.
	acres.	acres.	
Broach	321,591	100,198	} From official returns for 1860-61.
Surat	424,760	78,079	
Ahmedabad	743,716	124,965	
Kaira	994,578	16,482	
Ahmednuggur	2,932,794	6,909	
Poona	1,664,801	8,730	
Khandeish	2,166,640	273,141	
Belgaum	3,248,447	285,583	
Dharwar	1,406,712	386,421	
Sattara	1,994,425	40,516	
Sholapore	2,385,852	173,021	
	18,283,316	1,496,645	

† The amount of lands producing cotton in the Bombay Presidency, and adjoining protected and independent States, may be taken thus:—

	acres.
Khalsat lands assessed by Government	1,499,012
Lands not assessed	499,670
Kattywar	2,000,000*
North and South Berars and Raichore Doab ...	820,509†
Southern Mahratta Jagheer States	107,102‡
Brodera	about 130,000§
Rewa Kotta	12,500||
Kutch (no accounts, but the whole State said to be capable of producing cotton) ..	...
	5,068,793

No approximate statement of waste lands in the independent States to be relied on is to be found. Col. Davidson estimates that in West Berar and Raichore Doab alone there are 2,198,194 acres, and he has no estimate for East Berar.

* "Compilation" of 1862, p. 229. † p. 217. ‡ p. 228. § p. 229. || p. 230.

* Mr. Charles Kemball, the Collector of Kurrachee, in 1862, states that no part of the Bombay Presidency offers, in his opinion, greater advantages to capitalists than Scinde. There are thousands of acres of land lying waste, capable, with the aid of irrigation, which is readily available, of producing splendid crops of every description. The crops now generally grown, such as jowaree, different kinds of oil-seeds, &c., are perhaps the finest in India. That Scinde would produce cotton similar to that of Egypt, hardly admits of a doubt, and it might be worth the consideration of the Government to introduce a few small colonies of Egyptians for this purpose.

† Dr. Mallet's book.

‡ Page 155.

with others, responsible for his rent to government, the management of his property depending much on his character. As a general rule, he is a bad landlord, involved in debt, and his ryots or tenants are oppressed. Under the ryotwaree, which chiefly obtains in the Bombay Presidency, the ryot holds his land direct from government, his rent is fixed, and on cotton lands may average three shillings per acre.* He may cultivate what he pleases, but is compelled to pay a portion of his rent in four instalments before he has had an opportunity of realising on his crop—a blot on our revenue system, as it forces him to apply to the moneylender, to whom his crops are mortgaged to a ruinous rate.

However expedient it may be as a political or financial measure to dispose of lands in India, with a view either to create a landed aristocracy, a class of proprietors whose titles to their estates depend on the stability of the British rule, establishing a favourable influence in the place of that which our government has destroyed, or as a means of raising funds to pay off the public debts, the ryot is not likely to redeem his land tax, that he may hold his fields in fee simple, simply because it would not be to his interest so to do. As an expectation therefore of extending cotton cultivation or improving the condition of the ryot, the measure would be a failure, for the lands would soon fall into the hands of the money lenders, who would purchase them on speculation, with the object of raising the rents, and, consequently, obviating all the advantages of the recent reductions of assessment introduced by the revenue survey. But if the government encouraged the sale of zumeendaree estates to persons who had the power of improving them, and placed an upshot price on all waste lands, selling them by public competition, and at the same time declared the assessment as fixed by the revenue survey, to be permanent, refraining from demanding instalments of rent until the farmer had a reasonable opportunity of disposing of his produce, the ryot would feel his independence as the tenant of a liberal landlord; his condition would be improved; he would understand he had nothing to gain by a change of government, and it would be his interest to maintain the tranquillity of the country. There is nothing inherent in the native of India to prevent his raising himself in the scale of civilisation, but in all Oriental countries the government must lead the advance. We hear a great deal of its being the duty of the manufacturers to proceed to India to cultivate cotton, not that such is their duty, for were the whole Chamber of Commerce of Manchester in the present state of India, landed in any of the cotton districts, I have no hesitation in saying (and every practical man conversant with the natives will endorse that opinion), that the only means they would have of procuring a bale of cotton would be through the agency of those very middlemen who hold the ryots in subjection, and who would drive a profitable business also with them. Let the government take the matter in hand and act as any great landed proprietor of this country would do, selecting from amongst its own revenue officers those who, from their knowledge of the languages and native character, would be competent to undertake, in selected districts, the duty. Let them be men who believe, or, at least, hope, that India is capable of competing with America in producing ordinary cottons, and, having this hope, let them have a zeal and perseverance sufficient to meet each difficulty as it may present itself, and be armed with the in-

fluence which a revenue officer possesses in his district, holding the confidence of government, with power to reward or remove a subordinate servant, according to his efficiency or otherwise, and a full discretion to aid and assist every European or native capitalist who may desire to settle in his locality, and, at the same time, to confer favours and encouragements on enterprising ryots; if difficulties arise, he will surmount them, or, at least, be able to assign a satisfactory cause for his failure; but do not expect to introduce a great innovation, or to get rid of the abuses of ages, by issuing instructions emanating from a distant authority on an experience not adapted to India, instructions to be carried into operation by revenue officers whose time is fully occupied, without a particle of agricultural knowledge, who must of necessity be guided by the opinions of their native subordinates, persons desirous of escaping an onerous duty, and only too readily influenced by those whose interest it is to maintain things as they are.

If, then, the government, in its capacity of landlord (for these duties in India are inseparable), could be induced to select a few localities as a platform for further trials, proceeding upon principles wholly different from those hitherto attempted, leaving, for the present, the old cotton growing districts to reap the punishment they have brought on themselves, in neglecting the day of their opportunity, and being assured that if India can produce a field capable of competing with America, these districts must, in self-defence, either improve, or withdraw from participating in the profits of the export trade, and if capitalists will follow in the steps of the government, and erect ginning establishments, form agencies, make tramways, &c., &c., there is reason to hope that a new order of things would arise, which would go on extending until it had covered the whole country.

I do not, in pointing to two localities in the Bombay Presidency, desire to limit the operations of the government, for the more extensive those operations, the greater is the probability of eliciting the resources of India. I ask no extraordinary or expensive measure, no plans in violation of the rules of political economy, however much these rules may have been violated in instances where it has been desirable to maintain monopolies. All that is required of the government is an action in concert with the manufacturers of this country, and the adoption of the best and most efficient means of exciting the natives to improve themselves, to the mutual benefit of India and Great Britain.

After all that has been said of the failures in Scinde, I come to the conclusion, that if the experiments in that locality prove anything, it is that Scinde has never had a fair trial, and that as far as experiments have gone, they hold out a prospect of success. The mistake that appears to have occurred in Scinde was the attempt to introduce the green seed cottons instead of the black seed, which are generally, if not always, perennial, and of a more valuable description. In 1857, when Dr. Gibson was deputed to visit Scinde, he reported, "the appearance of the Delta promised very favourable results to the cultivation of cotton."*

Dr. Gibson also remarks, "I would observe, however, that as artificial and constant irrigation is the rule of cultivation in Scinde, and not, as in India, the exception, many varieties may perhaps be profitably cultivated here which have been abandoned in India, owing to the impossibility of cultivating them without irrigation."

The records of the cotton experiments in Scinde present one exception to the long list of failures recorded; a native zumeendar completely succeeded at Mehur in cultivating, in 1847, five acres of New Orleans, which yielded 640 lbs. of cotton per acre, yet subsequent experiments from the same seed failed on account of the attacks of worms. Captain Freedy, the collector of Kurrachee, speaking of the ravages of the insects, says, "If the former be the real cause, the evil might perhaps be pre-

* According to the revised assessments introduced by the Revenue Survey, the following rates may be considered as the average rent of cotton lands per acre:—

Southern Mahratta, including Belgaum and Dharwar	1 rupee, or 2s.
Khandeish	1 rupee 8 annas, or 3s.
The Deccan, including Poona, Sholapore, and Ahmednuggur	10 to 12 annas, or 1s. 4d. to 1s. 6d.
In Goozerat, including Broach, Surat, Kaira, and Ahmedabad	2 rupees, or 4s.

* "Revenue Consultations" 1857.

vented by planting the American cotton at an earlier period of the season, so as to admit of its ripening a month earlier; some good might possibly result by mixing lime with the soil at the time of ploughing, or by afterwards sprinkling it on the young plants. The experiment has never been tried in Scinde, but in England I believe the fly, which does so much injury to turnips, is prevented by these means."*

The collector of Hyderabad, in a letter quoted in the "Revenue Consultations" of 1857, writes—"The Egyptian cotton, which I take to be a variety of the Sea Island kind, seems to be admirably fitted; the hottest weather does not affect it, and the northern blasts of winter, instead of injuring, appear to give it additional life and vigour. It is longer, to be sure, in coming to perfection. The first year it does not yield cotton at all, and the second year but a scanty crop, but after that the yield is far greater than that of the common cotton; the fibre is longer and the texture more silky; there is double the proportion of fibre to seed, and the expense of cultivation would be less." It is manifest that this is the cotton to introduce into Scinde; it would require to be treated as it is in Egypt, and being a perennial, with the aid of irrigation, there is no reason why it should not be as productive and profitable in Scinde as it is in that country, the two countries apparently differing in no other respect than that the one largely exports cotton, which the other is unable to produce.†

For the green seed cottons I point to those districts which are influenced by the two monsoons, comprising the southern peninsula of India, containing an area of land sufficient to supply cottons to an unlimited amount of the description alluded to by Mr. Aspinall Turner, which identical cotton was grown in Dharwar in the year 1847 by an ordinary ryot, contracting with the collector to cultivate it at the rate of three rupees per acre, and consequently allowing that the acre only produced 100 lbs. of clean cotton, it cost on the spot less than three-farthings per lb., and realized at Liverpool 6jd.

I have made no allusion to Bengal or many other regions where cotton is produced, or to what may be the effect of improving the means of transit or communication in India;§ the result of one of many improvements, that

of rendering the river Godavery available for irrigation and cheap transit, may give to new and extensive districts a condition of prosperity surpassing any thing we have yet witnessed in India.

These are my reasons for believing that India can supply our manufactories with those varieties of cotton we require,* and that, by a proper and careful procedure India may not only compete with America, but undersell her on her own soil. If I am wrong—if you are satisfied that sufficient has been done in India, that it is not in India to give us what we require—the sooner we turn our attention to eliciting the great resources of our magnificent Eastern empire in some other direction the better. If, on the other hand there is still a hope, still a prospect of success, and the prize is worth striving for, let no failures dishearten, let no difficulties prevent—delays, opposition, prejudice, and even failures—where you looked for success will meet you; they all occurred in Dharwar; but having maturely and duly considered the matter, and made up your mind that the thing is to be accomplished, and that the success is only a matter of time, fix your time, limiting that time to five, ten, or fifteen years; consider well your plans, adopting some uniform mode of action, and having done this, let nothing daunt you; and if I have any experience of Indian revenue affairs, or any knowledge of practical farming in this country, I have no hesitation in saying that my firm belief and conviction are, that your endeavours will be crowned with complete success.†

notes on public works, estimates that the Ganges canal would yield a direct income on the capital expended on the work at 7 per cent. The Colonel then considers the indirect advantages of this great undertaking, in alleviating, if not wholly preventing, such a calamity as the famine of 1837-38, and observes, that from the increase of land revenue consequent on the extension of the area of irrigation, the direct return from capital may be doubled, which would probably yield 14 per cent. on the outlay. The results of the expenditure of the Madras Presidency in the last five years, the Colonel states, are really marvellous, for the returns, in some cases, gave 133 per cent. upon the outlay.

* The indigenous cotton of India has ever ruled, at Liverpool, about 30 per cent. lower in price than ordinary American, and if in India we can produce cotton of a staple equal to that of the American, and at the same time giving a yield of double the amount of the indigenous cotton, the expense of cultivating both cottons being the same, it is obvious we are conferring a very extensive advantage, and giving to India not only the power to compete, but to supersede and undersell the American cottons. If it be found to be true that there exists in India a locality where the acclimatised seed of the pure American descriptions will not thrive, the process of hybridising the indigenous cotton of that district would not be difficult, and thus a new kind of cotton might be introduced; but no improvement in cultivation will ever change the nature of native cotton, or make it otherwise than native cotton, or transform the black seed variety of the plant into green seed, or vice versa.

* "Revenue Consultations," page 1562 of 1857.

† Major F. J. Goldsmid, many years Assistant-Commissioner in Scinde, now Collector and Magistrate in Kurrachee, writes:—"I may mention that Mr. Commissioner Frere's Report to Government, contained in the public records of the province of Scinde, shows the area of the dependency to be 57,552 square miles; of these, in 1856, there are data to show that about 1,725,000 acres were under cultivation." Major Goldsmid adds, that the cultivation of cotton is but small in Scinde; that it is grown on lands left by river inundation, requiring artificial irrigation as in Egypt. Irrigation is everywhere the rule in Scinde; Major Goldsmid considers the means of irrigation may be greatly extended, and that at present it is insufficient. He gives the average rent of cotton lands to be 1s. 6d. per acre.

‡ A tract of land comprising in this the peninsula of India between 8 and 9 degrees latitude. The cotton cultivation in the United States being, according to Mr. Ellison's handbook, from 6 to 6½ millions of acres, employing about 800,000 negroes, and averaging a yield of seed cotton at 530 lbs. per acre.

§ The Bombay Government, with a laudable intention for which it has never received full credit, desirous of improving the communications of the southern Mahratta country to the sea, has, within the last 25 years, opened roads down several ghauts of upwards of 2,000 feet in height, leading to the ports of Rajpore, Vingorla, Compta, and Mangalore, and has now selected a fifth outlet at Sadasaghud. It is doubtful, however, whether any of these ports holds the natural advantages of Goa, a Portuguese dependency, the nearest to Dharwar, with water carriage to the foot of the ghauts-piers ready made, and a working population at hand, Goa requiring nothing but a liberal Government to rival Bombay, and with this view, a recommendation was made to the Bombay Government, in 1843, to suggest to the Home authorities the benefits which would accrue to Goa and British commerce, if the King of Portugal would declare Goa a free port. Colonel Sykes, M.P., in his

† THE LAW OF CONTRACT.—It has been always usual for the Government to make advances to Ryots to promote cultivation known as "Tuccavee" advances, but of late years Tuccavee advances have been less resorted to, and some revenue officers have altogether discontinued them as being objectionable. In Dharwar, where the growth of cotton has, within the last few years, been more rapid and extended than in any other part of India, no Tuccavee advances were made to stimulate its cultivation, but at the same time it is only fair towards the advocates of a Law of Contract to say that Government, when making Tuccavee advances, reserved to itself the right of recovering those advances by a summary process, in the same way as current revenue is collected, and charged also an interest on the loan. [Regulation XVII. of 1827, chap. III., sec. XIII.] The Law of Contract is a question that is surrounded with difficulties. [Act VIII. of 1859.] As the law at present stands for the enforcement of a contract, a creditor may bring an action against his debtor at any time, and if he can show that he either intends absconding or making away with his property, he may be arrested or be required to give security for the fulfilment of any decree against him, and, failing in this, his whole property may be attached. The decree may be either for specific performance or damages, and it may be enforced by either seizure of the debtor's property or by imprisonment. It has also been

DISCUSSION.

Dr. RIDDELL said he had listened with much attention to the paper, and a residence in India for upwards of thirty-seven years enabled him to endorse all that had fallen from Mr. Shaw that evening. The latter portion of the paper referred to the capabilities of Scinde as a

enacted by the Penal Code [Act XXIII. of 1861] that whoever cheats, or whoever, by deceiving another person, induces that person to do, or omit to do, anything that causes or is likely to cause damage to that person, is said to cheat, and liable to be imprisoned with hard labour for five years, or fined. The advocates of the Law of Contract consider these provisions insufficient; they plead for a summary enforcement of the law, without its delays or power of appeal. That the Koolkurney, or Village Accountant, should be required to register contracts between the advancer and the ryot, and that on the exhibition of this agreement before a competent authority, a decree should be issued to be followed by summary enforcement. They pray also that numerous Courts for this purpose should be established. The objections to this process are, that the Koolkurney is an hereditary Village Officer, who may be often absent on his revenue duties; his salary is chiefly derived from lands and a per-centage on collections, and is usually very small, and if required to perform this extra duty, it would be necessary to remunerate him or any other person who was so appointed, and, however small the individual salary, in the aggregate it would amount to a considerable expenditure, which would fall on the advancer. The existence of a Law of Contract as proposed, would perpetuate and legalise a system of middle-men and money-lenders which it is desirable to get rid of, and those who advocate this law should reflect, that as the money-lenders at present established, have for generations been in the habit of making advances to ryots, it is probable they would always be beforehand in dealing with the cultivators, and that, consequently, the enforcement of the proposed Law of Contract would place them in a stronger position to oppress the ryots, and remove the European agent to a greater distance from the cultivator than he at present occupies. The law would act detrimentally to all other creditors as giving a priority of claim to a debt registered for a recent advance; it would, therefore, preclude a ryot from obtaining credit on other accounts. A ryot, moreover, in difficulties, may accept an advance on his crops to their full amount, for the purpose of defeating the claims of his just creditors. In a year of admitted failure of crops, a creditor holds a ryot completely in his power, and may dictate his own terms for not enforcing a claim; and, however moderate the creditor may be, if he attempted to enforce a just and lawful claim, the law would become unpopular, while if he did not enforce it, the ryot may think to avoid the payment of the debt by ceasing to cultivate cotton, so that, in either case, the law may defeat the object for which it was enacted. There is no analogy between an advance on cotton and indigo. Indigo is cultivated on large estates belonging to or rented by the planter, and the ryots are more under his control as tenants, he himself, a manufacturer, living amongst them; but the cultivation of cotton is spread over the face of the country in small patches. Unquestionably, as the law now stands it is defective. The distance of the Court, the delays, appeals, and expense, amount to a denial of justice; but there is a remedy to be found in establishing more numerous Courts, with a summary jurisdiction without an appeal, for the recovery of all small debts, limiting this summary procedure to debts incurred within the twelve months, and not executing the decree to the prejudice of a decree that may be in operation in favour of any other creditor, so that a ryot could not with impunity defraud the advancer, nor could an advancer, to the injury of an older and equally just creditor, claim a priority in his own favour. Let the law for the recovery of all small debts be the same, and let the procedure be that which has already been long in practice in large military cantonments, by which the military officer, acting as superintendent of the bazaar, has [Regulations XII., chap. iv., sec. 32] "with a view of providing speedy justice in cases where the amount in dispute is trifling and delay is seriously inconvenient," "authority to receive, try and decide, in a summary manner, pecuniary claims, provided that the sum in dispute does not exceed thirty rupees;" and as decrees against lands and crops can only, by the existing law, be executed by revenue officers, there can be no objection to vesting those officers with powers to the above extent, to summarily decide and enforce a decree relative to advances made on crops by private individuals.

cotton-producing district, whereas the best part of his own life had been spent in the districts of Berar and Nagpore, where cotton had always been grown to a great extent, and which was regarded as the most favourable district of India for the growth of indigenous cotton. It was true this cotton did not yield a produce equal to the American cotton; but when they considered the cheapness of the rent of the land on which it was grown, and the cheapness and abundance of labour by which it was cultivated, it yielded very good returns. He found, according to information which had been furnished by a friend of his, who was a commissioner in India, that the yield of cotton in 1856-7 was about 70 lbs. per beegah, a beegah being rather less than half an acre. The late Dr. Forbes Royle had calculated the yield at 100 lbs. per beegah. This cotton was certainly of short staple, as compared with the American plant, but it was valuable, and was sold in India at something below a penny per pound. He found that in North and South Berar there were upwards of seven million beegahs of land at the present time capable of producing cotton, and, taking the produce at 70 lbs. per beegah, they would have an annual yield of upwards of a million bales, weighing 500 lbs. per bale. That alone would show them the immense amount of cotton which might be grown in the Nizam's territory alone. With regard to Coimbatore, Dr. White had told them that the American cotton-seed had yielded generally about 800lbs. of cotton per acre, but he (Dr. Riddell) might tell them that within the last month he had received intelligence from a gentleman in Scinde, who had been growing Egyptian cotton for the purpose of exhibiting it for the prize offered by the Government, that the land on which it was cultivated yielded no less than 950lbs. of cotton per acre. Had they anything in America better than that? Samples of that cotton had been sent to the Chamber of Commerce of Bombay, and they were so surprised at the extent of the yield, that they thought it was a mistake. The same gentleman, in 1859-60, cultivated seven beegahs of land near Kurrachee; in the following year he increased the quantity to 16 beegahs, and last year he cultivated 30 beegahs, producing 950lbs. per acre of cotton, which the Chamber of Commerce of Bombay said they had never seen equalled in quality. They compared it to the best Sea Island cotton they had ever seen. If, therefore, such an amount and quality of cotton could be produced in those parts of India where the climate and soil were similar to those of Egypt, what occasion was there to look beyond India for our future cotton supply? He had heard it stated by gentlemen of Manchester, that India was incapable of producing cotton; but they had proof that, with care and attention, 950 lbs. of cotton per acre could be grown there. The climate and soil of Scinde resembled those of Egypt. The rains were to no great extent, and no doubt very much depended upon irrigation; but were they to attempt to grow indigenous cotton on that soil, he had no hesitation in saying that, water it as they would, they would only injure it. Dr. Mallett had confirmed the statement that the soil of Alabama was similar in many respects to that of India; this was the case to some extent, although not entirely, for although the under strata might be moist within a certain distance of the surface, yet this was not generally the case. It was true that when there was an abundance of American cotton in the Liverpool market Indian cotton fetched a lower price, and the result was that the natives would not go on cultivating it, which had led to the supposition that India was incapable of producing cotton. All they wanted was English capital and energy to be carried to India by English merchants. Let them send well qualified men, who would make themselves acquainted with the language of the country. Let them treat the natives kindly, and induce them, by showing them the benefit they would derive from it, to become regular cultivators of cotton. He was quite sure that when it was shown to the natives of India that their own interests were mixed up in the matter, they would be in-

clined, like Englishmen, to do the best they could for themselves.

Mr. FLEMING as one connected for many years with the cotton trade of Bombay, would express his opinion that the amount of produce given by the last speaker was very much exaggerated and was the result of estimate rather than of experiment; he believed there were at present very few correct data to go upon with regard to the yield of cotton in India. The probability was that the produce was on an average about half the quantity just given, and even such a yield as that would be very satisfactory. He had listened to the paper that evening with much satisfaction. As a merchant, having had many years' experience in India, he had come to nearly the same conclusions as Mr. Shaw. He was satisfied that in almost every part of India exotic cotton might be profitably cultivated. He believed the government experiments in this matter failed from a want of personal interest on the part of those who made them, and that any future experiments similarly conducted would meet with the same kind of failure. Mr. Shaw had very modestly suppressed the fact that it was mainly through his personal influence and exertions that the New Orleans cotton was introduced into the Mahratta country; and it was a rare thing to find a person in Mr. Shaw's position who would take the same active interest in the matter, engrossed as he was with his public duties. His own impression was that much was to be done by setting an example to the people of India. That being his own conviction, the house with which he was connected were acting upon that principle at the present moment, and two farms were on the point of being established—one in Scinde and the other in the Deccan. He was convinced that the cultivation of native cotton was capable of great improvement. The present system of cultivation in India was very bad. They knew what had been done by the application of skill and capital to the agriculture of our own country, and the immense strides which it had made in consequence, and he was certain that the application of skill and capital to the cultivation of cotton in India would be followed by similar good results. The experiments in progress in the South Mahratta country were still incomplete. It was only with great difficulty that land to the extent of about 70 acres was obtained from the natives. Those 70 acres were divided into two fields of equal extent; one portion was treated exactly as the natives would have treated it, the other portion was ploughed and treated as a skilled English agriculturist would treat it. The experiments were being carried out by a practical English farmer, and the report he had received was, that whilst the field which had been treated upon the native system presented very much the same appearance as the other fields in the same district, that which had been treated upon the English system presented an appearance which was unequalled in the whole locality. Mr. Shaw had suggested that the support of government should be given to individual attempts in this direction; but what he (Mr. Fleming) said was, let the government see to the making of roads and opening out the communication from the interior of the country to the ports of shipment, and let them leave it to individual enterprise to do the rest. If the people of Lancashire desired to do good, let them send out men to India to cultivate cotton. In his own experience he had found the greatest willingness on the part of the government to smooth away difficulties, and the difficulty of obtaining land in favourable positions was the greatest they had to contend with. There was a large extent of waste land in Khandeish, but much of it was unfavourably situated for the growth of cotton, owing to the difficulty of transporting the produce from it. The localities most convenient for the transport of produce were for the most part already occupied. In his opinion, one great bar to progress in this direction was the existence of the present class of very poor peasantry in India, who had neither the capital nor the appliances for improving the cultivation of the soil; and when the capitalist

sought to do anything in India, he found a difficulty in getting possession of land except at relatively exorbitant prices. The natives of India had a pride in their possessions, and would not give up their land except at prices very much above its real value. The one great thing they must look to in India was the opening of the great trunk railways, with proper roads communicating with them throughout the interior of the country. They already had a railway opened from Surat to Goojerat, and another in Central India through Berar; but in the South Mahratta country, where American cotton was most successfully cultivated, there was a lamentable deficiency of the means of communication, and there were no good roads whatever. He felt satisfied that until they had railroad communication with the South Mahratta country, the resources of that district would never be properly developed. The crop there ripened late, and owing to the rains could not be exported till the month of April. Probably not more than 5,000 bales could be got away for shipment before May, and the rest of the crop had to remain till October before it could be exported, so that the larger portion of the cotton crop had to be kept back for six months, owing to the want of means of transport. Nor would common roads obviate the difficulty. When the cotton was carried in the common bullock carts of the country, which travelled at the rate of about two miles an hour, it was injured by exposure for such a length of time during the wet season; but with railways and covered trucks the case would be very different, and the produce would be conveyed to the coast in as many hours as days were now occupied in the journey. The great thing, therefore, they had to look to, was the establishment of railway communication with the South Mahratta country, as the only means of opening out one of the principal cotton fields of India.

Colonel W. H. SYKES, M.P., said, the proposition whether India could produce cotton having in his opinion been established by Mr. Shaw, the main question to be considered was by what means the quality of the cotton could be improved. The question had also been raised whether India was capable of producing sufficient cotton for the supply of this country, regard being had to the quality of the article? Therefore the subject resolved itself into these divisions:—viz., could India produce cotton of the different varieties required, and were the inducements to the cultivator sufficiently strong, and would the produce find its way to this country? In the first place, with regard to the capabilities of India to produce cotton, it extended over about twenty-five degrees of latitude, and in this immense territory every variety of soil and climate were met with, so there could be no doubt as to the capability of many portions of it for the production of every variety of cotton. The ordinary staple of Indian cotton was short compared with that which they were best acquainted with in England, but it did not follow that that was the only description of cotton India could produce. Dr. Riddell had shown before the Asiatic Society some cotton grown in Hyderabad, without irrigation, which, in staple was equal to anything which America could produce. His friend Mr. Shaw had shown them that New Orleans cotton could be produced in Dharwar and also in Scinde. At the Statistical Society, a few nights since, were exhibited no fewer than 120 varieties of cotton of different staples produced in different parts of India, and from twenty different parts of the country specimens of cotton of a staple equal to American were shown. Therefore they might make up their minds that India could produce any amount of cotton and of different staples. There was no doubt that cotton of short staple was not adapted for the machinery generally in use in this country, nor was it desired by the manufacturers. He agreed with Mr. Fleming that a great deal was to be hoped for by improved methods of cultivation; but he was afraid the account given them of 800lbs. or 900lbs. to the acre was beyond what they could reasonably expect. He had always understood that 70lbs. per beegah was a good crop,

and that 210lbs. per acre was an extraordinary crop. That was what he gathered from the reports.

Dr. RIDGELL said it was stated in the reports that 800lbs. to the acre had been grown in Coimbatore.

Col. SYKES added that might be from the different mode of cultivation; in cases where the land was ploughed upon the European method the crop might be greater than under ordinary cultivation; but he recommended them to confine their expectations within reasonable limits to prevent disappointment. Assuming the question, whether India could produce the quality of cotton they required, to be set at rest, the next point that arose was, was there sufficient inducement held out to the cultivators to produce it? His friend Mr. Shaw had spoken of the government as being the proprietors of the soil. They were not so, however, as was proved by the statement of Mr. Fleming, that he had found great difficulty in purchasing land from their native possessors. Twenty-five years ago, he (Col. Sykes) asserted that there was no such thing as the government being the possessors of the soil, excepting as to the waste lands, and he held in his hand a letter addressed to Lord Elgin by Mr. Murdoch, who had travelled through a great part of India, as an independent inquirer, and this was what he said with regard to the proprietary right of the land in the native cultivators:—

The late lamented Colonel Baird Smith has the following remarks in his report on the famine:—"There is no acre of land among the thirty millions or thereabouts forming the total area of the tract on which private rights of various kinds do not exist, and arbitrarily to destroy them is what nobody would think of. Government can only dispose of what belongs to it, and all that does belong to it is the right to sell the proprietary tenure of estates on default of payment of revenue. If there is no default there is no power of sale. The buyer buys the proprietary rights on these terms, and these terms do not imply the extinction of even the humblest subordinate rights. Such rights are quite as precious to their owners as his peculiar holding is to the statesman of the Lake districts, or the yeoman of Kent or Sussex."

From this it was evident that if there was no default on the part of the owner in the payment of the rates and taxes, there was no power of sale on the part of the government. The people of India had a right to cultivate the soil as they liked. There were no stipulations, as was the case in England, as to the rotation of crops. The occupier could grow anything he pleased, and continue the same crops year after year, and the government had no power to interfere. The question was whether it was worth the while of the proprietor or permanent occupier of the land to grow cotton, instead of sugar or other products. At the present prices of cotton in this country, it would be worth their while to grow cotton instead of sugar. He believed the present price of cotton was 2s. 7d. per lb. As long as the prices were high they might induce the cultivators of India to grow cotton, but if the price fell to its former level of 3d. or 4d. per lb., the supply which now came from India, as a sort of spasmodic effort, would decline. In conclusion, he would say he regarded Mr. Fleming's proposition as the most practical one that could be carried out. Let those who wanted a particular kind of cotton from India send persons there to cultivate it. It must, however, be borne in mind that there was an opportunity of obtaining cotton much nearer home. At the late Exhibition a large number of specimens of cotton equal to New Orleans were shown as the productions of Italy. There were sources of supply as it were at their own door, and he thought they were worth inquiring into. He would only add that no doubt India was capable of supplying any amount of cotton, but they would not get the ryots to cultivate it unless they could obtain prices which made it worth their while to do so.

Colonel RATHBONE said, his name having been mentioned in the paper in connection with the subject, one or two observations from him might not be considered out of place. It was well known that cotton grew wild in India; it was an indigenous plant of that country, and

the whole of India was supplied with cotton of the growth of that country. Cloth of every quality was produced in England from Indian cotton. The unrivalled muslins of Dacca were produced in India from the same material. They also knew that a large quantity of cotton was exported from India to China. It therefore appeared to him, that if the English manufacturers adapted their machinery to the working of the quality of cotton which was grown in India, they would then be able to use it, and it thus became a question rather for the machinists and the manufacturers of this country than for the cultivators in India. With reference to the various qualities of cotton which India was capable of producing, the remarks of Colonel Sykes were perfectly true. They had in India every variety of climate and soil, and he saw no reason why they should not grow the same quality of cotton as was produced in America if they particularly required it. He could bear personal testimony to the remarkable resemblance between the soil and climate of Scinde and those of Egypt. In both cases irrigation was alike obtained from the snowy mountains. The cotton in Scinde required irrigation; but cotton was not an autumn plant, and to reap the benefits of irrigation, it required that the crop should be matured about September or October. With reference to the inducements to the ryots to engage in the cultivation of cotton, he agreed with much that had been said by Colonel Sykes; but it might be remarked that cotton was something like hops in this country—a very profitable crop if it succeeded, and a very losing one if it failed. A capitalist might engage in that cultivation, because, if he failed in one season he might make his profits in the next, but a season of failure would be absolute ruin to the poor ryot of India. That was one reason, he believed, why they had generally so little fancy for the cultivation of cotton; and he thought, under those circumstances, the only plan by which we could expect to get cotton from India was by the investment of English capital and energy in its cultivation. Whether that should be done by individuals in this country, or by the Government of India, he was not in a position to say; but he thought unless capital was extensively invested in that enterprise we could not look for large and permanent supplies of cotton from that country. He believed it was the same in America. The cotton was produced by enormous expenditure of capital on the part of the Southern slaveholders, who were under large mortgages to the North for the means of supplying that cultivation. If they depended solely upon the ryots in India, he believed their expectations would be disappointed; but if they were willing to invest capital in the enterprise they might have any amount of cotton of every quality they desired.

Sir ERSKINE PERRY, M.P., begged to thank the Society for the opportunity that had been afforded him of hearing a paper and discussion upon, perhaps, the most interesting and important topic that could engage their attention at the present moment, and he had attended that evening with a view to hear what the most intelligent men of the day had to say upon it, as tending to guide the future proceedings of the government on this question. He had made himself acquainted with the results which had attended the experiments of Mr. Shaw, in Dharwar, and he must add his testimony as to the extreme modesty of that gentleman in having kept in the background the great share which he had in the success that had been achieved. But he came there thinking that some attacks would be made upon the government on account of the failures that had been stated to have taken place in the transmission to this country from India of the quality of cotton that was required; because in many parts of England, and especially in those parts most interested in the cotton trade, everybody found fault with somebody or other for what had occurred, and generally it was the government who had to bear the brunt of the abuse. However, there had been none of those attacks that evening; on the contrary, they had heard that the intelligent Governor

of Bombay, Sir Bartle Frere, had given every encouragement to those who had conducted the experiments with regard to cotton cultivation in India. They had that evening heard of three or four—he would not call them panaceas, but stimuli, which ought to be applied to this question. Mr. Shaw had suggested in his paper that what the government ought to do was to seek out from amongst their officers men of zeal, knowledge, and great faith in cotton; men who by the influence of their position should stimulate the ryots to engage in an improved method of cultivation, and by that means encourage the growth of a superior quality of this product. He thought there were several objections to that scheme. Such men were extremely scarce in any service, and probably few men would have done what Mr. Shaw had. The high officers of the government were fully occupied in the administration of justice, and the other duties of government, which, important as cotton was, were paramount to the cultivation of any particular plant. Mr. Shaw was a favourable exception to what he was saying, because, with great activity in his office, he combined a love for, and a practical knowledge of, agriculture, and by that means he was able to exercise a beneficial influence; but even Mr. Shaw must admit that such officers were very difficult to find. It appeared to him that a much sounder principle was enunciated by the gentleman behind him—Mr. Fleming—when he said they must look to individual enterprise to produce the results they desired to see, and by that alone would such results be produced. Then, again, Colonel Rathbone, who was known to him by the great services he had rendered the government in Scinde, had pointed to another order of men whom he considered to blame for the unfavourable results at present accomplished. He had shown that over the vast area of India cotton could be produced to any amount required; but he said if the English manufacturers could not work up the cotton of India, it was the fault of the machines, and not the fault of India in not producing the cotton. It was suggested that by the application of additional capital and improved skill in agriculture they might obtain a better quality of cotton for the English market. Now, he (Sir E. Perry) had had some little experience in farming. He was for some years after his return from India what was styled a gentleman farmer, and, like most of that class, he burnt his fingers by the experiment; and though he was glad to hear that practical English farmers had been sent out to India, and the best kinds of implements employed, he would, nevertheless, venture to express his opinion that expensive farming would not be attended with profitable results in that country. In point of fact, improved farming meant a great additional expense, and the application of capital to the soil; and from all he had heard, with the soil of India under a burning sun, cultivating with improved implements, and putting on manure which had to be imported from a long distance, the results which had been attained as yet were far from profitable. On the contrary, gentlemen accustomed to the modes of cultivation in America had expressed the opinion that, with the soil and circumstances of India, the mode of cultivation employed by the ryots was that which was best suited to that country. At the same time, he had no doubt that such experiments as had been mentioned by Mr. Fleming would be advantageous, even if they failed at first, in affording an example of what might be obtained by improved cultivation. There was one other point to be observed in confirmation of the views he had stated—viz., that it was self-interest alone on which they ought to depend for an additional supply of cotton from India. He agreed with what Col. Sykes had said—that as long as the prices afforded a stimulus, they might expect good supplies of cotton from India; but neither in the paper nor in the remarks of those who had spoken upon it was there any solution of the problem, “Will India ever be in a condition to supply all the cotton we require in this country, if America returns to her *status quo*?” Col. Rathbone would say, “yes, if additional capital and

skill were employed;” but additional capital would necessitate larger prices for the article. Could India, when New Orleans cotton was selling at 5d. per pound, enter into competition with America? He confessed he doubted it. The latest reports from India showed that increased skill had been applied to the cultivation of the soil, but this did not include cotton. The prices which it brought in this country did not stimulate the increased cultivation of that article, therefore he was afraid when America was restored to that peace which they all desired to see established, she would come into competition again with India, and India would go back to the production of those commodities which it best served the self-interest of the people to devote their attention to.

The CHAIRMAN, in proposing a vote of thanks to Mr. Shaw for his paper, remarked that he joined in the feeling that had been expressed by preceding speakers, that that gentleman had been too modest in the mention he had made of his own efforts in Dharwar. After the government had opposed his proceedings; after the American planters had declared that the cotton he had grown was inferior to the native cotton; after the Chamber of Commerce of Bombay had expressed the same opinion; and even after the merchants in India had given a higher price for the native cotton than they would give for his, Mr. Shaw persevered in his efforts under a conviction of the superiority of the article he had produced over the native cotton. It was not until Mr. Shaw's cotton reached Liverpool that its real value was discovered. There the native cotton was sold for 3½d. per lb., while that grown by Mr. Shaw fetched 6½d. per lb. Mr. Aspinall Turner, who took a great interest in this question, had worked a portion of the cotton of Mr. Shaw's growth. At the same time he purchased what was called ordinary New Orleans cotton, for which he gave 6½d., the price of the Indian cotton being fixed at 6½d. Mr. Turner worked up an equal quantity of each description of cotton, and watched them carefully through each process. The result was that the Indian cotton produced 3 per cent. more yarn than the American cotton, and of equal quality. This New Orleans cotton was of a quality similar to the bulk of the cotton generally used in this country, and, therefore, if Mr. Shaw could grow a quality equal to New Orleans, he was able to grow just what this country wanted. Mr. Shaw's cotton, which he sold to Mr. Aspinall Turner for 6½d., only cost three-farthings per lb. picked on the field. Dr. Riddell had referred to Berar as one of the finest districts in India for growing cotton, yet it was only last year that they received any cotton from that district, for although they could buy cotton at Berar for a penny per pound, it was at a distance of 600 miles from the port of shipment, and there were no roads to get it down. It was only when cotton rose to a shilling per pound that the merchant could afford to pay 2d. per pound for the transport of it upon the backs of bullocks; but there was the river Godavery, which could bring the cotton down at a cost of half-a-farthing per pound, if the navigation were opened up. The great advantage possessed by America was in the cotton plantations being situated near the great rivers, and they sent down the Mississippi millions of pounds of cotton for half-a-farthing per pound; and if America paid half-a-farthing and India paid 2d., the article could not be produced upon equal terms. His hon. friend, Sir Erskine Perry, had felicitated himself upon the government of India having escaped blame in this matter in the course of the discussion; but he (the Chairman) thought in the matter of the Godavery, the government ought not to pass scatheless. As regarded the cotton of Scinde, he thought 900lbs. per acre was an exaggerated yield; but suppose they took it at half that amount (450lbs.), that was higher than the yield in America; and besides, it was Egyptian cotton, which was superior to that of America. Then, again, upon the point that cotton could not be grown without irrigation, there was the fine river of the Indus. Why should that be

allowed to run waste to the sea, whilst there were lands on its banks capable of producing cotton without end. He must therefore charge the government with sins of the past. He hoped they would yet come to a sense of their duty; and he was quite sure if his hon. friend (Sir Erskine Perry) had any control they would have no reason to complain for the future. He was sure the meeting would be unanimous in expressing their acknowledgments to Mr. Shaw for his very able paper.

The vote of thanks having been passed,

Mr. SHAW, in acknowledging the compliment, said, comparison had been drawn between the amount of cotton grown in the Bombay presidency and that grown in the United States. He could state that more cotton was produced in that presidency than in the whole of the United States. With regard to the supply to this country, they were told it was entirely a matter of price. To a certain extent that was true, but it was not a matter of price alone. They must have quality, and they had seen all along that the price of Indian cotton had ruled about 30 per cent. lower than ordinary New Orleans; besides that, wherever the New Orleans grown in India obtained a footing in the market it would always be more profitable to grow than Indian native cotton, because the yield of it was double. He maintained that even if the native cotton could hold a footing in Liverpool, the New Orleans coming from India would be the most profitable cotton to grow, and that would be sufficient to create a stimulus for its cultivation. Besides the New Orleans cotton from India produced 20 to 30 per cent. more yarn than the native cotton. Col. Sykes had spoken of the ryots being the proprietors of the land. Did he mean to say that if the government chose to double or treble the land tax they would not have the power to oust the ryot and sell the land if he was unable to pay? There had been a great mistake in this country with respect to the government of India. No government could have been more kind or considerate to the natives than the old East India Company had been, for it was their interest not to oppress the ryots and throw the land out of cultivation. The tax should be definitely fixed, and then the ryot would be safe from being turned out as long as he paid it. It was certainly an advantage to the ryots to get advances; but it was remarkable that in Dharwar no advances had been made. With regard to encouraging manufacturers to send out persons to cultivate cotton in India, little progress would be made unless they received the countenance of the government officers. He did not want the government to grow cotton, but to instruct their officers to afford every encouragement to those who undertook its cultivation. Unless the government gave this kind of aid no advance would be made. The staple and the quality should be improved, so that it might compete with American. Having once done that, there was nothing to prevent them from ousting America from the market, because the rents and cost of cultivation in America were higher than in India.

The Secretary announced that on Wednesday evening next, the 25th February, a paper by Mr. John Cheetham, "On the Best Means of Promoting the Supply of Cotton," would be read. On this evening, Thomas Bazley, Esq., M.P., will preside.

AWARDS OF MERIT AT INTERNATIONAL EXHIBITIONS.

(Continued from page 230.)

In August last the Council of the Society of Arts issued a letter, inviting the opinion of the Jurors, the Commissioners for the Colonies and for Foreign countries, and the principal Exhi-

bitors at the International Exhibition, on the question of Awards of Merit in connection with International Exhibitions; and requesting replies to the questions given below, with the intention of embodying the answers in a public report.

AWARDS OF JURIES.

- 1.—Are you of opinion that Awards for Merit, by medals or otherwise, in International Exhibitions, are desirable?
- 2.—State the reasons for your opinion.
- 3.—Ought Works of Fine Art and Designs to be excluded from the awards?
- 4.—Can you suggest any better method than the appointment of jurors for making the awards?
- 5.—Can you suggest any improvement in the constitution or proceedings of the juries?
- 6.—Is any appeal from the decision of the juries desirable?
- 7.—If you think awards undesirable, can you suggest any other means by which meritorious productions may be brought to the notice of the public?
- 8.—Have you any further suggestions to offer on the subject?

The following is a summary of the replies received. The figures attached to the replies correspond with those of the questions:—

G. S. WALTERS, South Australian Exhibitor.—1. Yes. 2. The stimulus to enterprise and improvement. 3. No. Those who decline competitive examination might be separated off. 4. Not in this country. 5. Juries in this country for each class, professional or mercantile, should be elected by the parties themselves interested, and only one award of merit in each class. A chairman for each, to preserve order, to be nominated by the Exhibition authorities. The chairman to have no vote; but he may append, or not, his approval of the award. 6. With the consent of the chair, the juries might revise their own decisions once, but no appeal from the decision. 7. Cannot. 8. Yes. The entire work involved in awards is too multifarious and vast to be performed altogether in this country, so as to inspire confidence and satisfaction. Each country and colony exhibiting should be invited to affix its own awards to its own articles in its own way; one award only for one class, Great Britain giving her own awards for her own products in her own way. Every country knows its own difficulties and products, and is the best judge for itself. By such an arrangement the labour would be divided, and the awards more deliberate and careful. Dissatisfaction and responsibility would be removed from the authorities. The public would see and compare the articles deemed best by each country. In case of non-compliance with the invitation, the parties in default should put up with the consequences of the neglect. So much for rewards of merit. In transcendent cases, but only where awards of merit had been given previously, the authorities should reserve to themselves the power to give medals.

E. H. WARD, Exhibitor, Class XXIX.—1. No. 2. The want of justice and failure manifested. 3. No. 4. No. 5. Greater competency on part of juror. 6. Yes, clearly in the present instance. 7. No. 8. Has nothing further to state, and greatly regrets the cause for the present complaint of an ineffective system, fearing lest it may tend to decrease the inclination, and thus lessen the number of exhibitors at any future Exhibition, whether International or otherwise.

ISAAC WATTS, C.B., Chief Constructor of the Navy, Juror, Class XIIA.—1. Awards desirable. 2. Some mark, by which to signify the favourable opinion of competent judges, is due to the exhibitors, and cannot be otherwise

than acceptable to the public. 3. Works of fine art and design should be excluded from the award. 4. Nothing better suggests itself. 5. No. 6. Thinks not. 8. Not any.

A. WESTENHOLZ, Consul-General and Commissioner for Denmark.—1. Medals and honourable mentions accomplish the object desired. 2. This opinion is based on a conviction that awards of this nature attract foreign exhibitors. It is a fact that the majority of these do not exhibit with a view of finding a foreign market for their articles, and even many of them would be unable to supply a demand. This numerous class hope, by receiving such a distinction in a foreign country, to establish thereby a reputation for their home trade. 3. Classes 37 and 40, viz.:—Architectural models and designs, and etchings and engravings, might, with advantage, have awards granted to them, but classes 38 and 39, viz.:—paintings and sculpture, ought to be excluded. Thinks it would not be possible to form a jury competent to give anything approaching to satisfaction. 4. Properly constituted juries appear the only system through which awards can be granted. 5. An efficient plan for the organisation of juries has not yet been adopted. In general each jury has been too numerous, and while it may be said a few members only do the real work, their responsibility is diminished, and, as it were, screened by the great number of non-acting members. A reduction in the number of jurors, therefore, seems essential, and only such members as will really act should be elected. Would also suggest the advisability of providing each jury with a secretary, who, by payment or otherwise, should be held responsible that every article in his class was carefully examined. Instances would then not be so likely to occur of articles being passed over, although attention had been called to them, as experience proves has often been the case. The council of chairmen of juries, consisting of 36 members, although well adapted for laying down general rules, &c., seems too numerous to consider and ratify the awards of the jurors; the work they have to get through being so extensive, it is impossible for them to enter into details. Thinks great benefit would result from a subdivision into sections, say, for instance, into three, in the same manner as the first 36 classes of the present Exhibition. Each section would be thereby enabled to give its undivided attention to its respective classes, and the number would still be sufficiently large to give full weight to its decisions. To the aid of the councils of chairmen should be called the chief foreign or acting commissioners in as far as regards the awards to their own countries. This would prevent a repetition of such mistakes as giving prizes to exhibitors whose names appeared in the catalogue but who failed to exhibit. The intimate acquaintance which these gentlemen must be supposed to possess of their own manufactures, and their local knowledge, would, it is evident, enable them to supply the council with such information as ought necessarily to have considerable bearing on the various questions under consideration. With regard to the awards to the country where the exhibition is held, the appointment of a special commissioner, to act in a manner similar to the one suggested respecting the foreign commissioners, might also prove beneficial. 7. If, as suggested, the council of juries were divided into sections, and the foreign commissioners invited to act, sees no necessity for appeal, but should a court of appeal be considered desirable, it would be easy to constitute such by a full court of the council. With the constitution of juries and council of chairmen as at the present Exhibition, experience seems to prove the absolute necessity, for the sake of giving satisfaction as well as doing justice, to have such a tribunal, but the constitution of it would be most difficult, as it would be impracticable for it to consist of a larger number of members, and it would appear anomalous for a smaller body to upset the decisions of both the common juries and the council of chairmen. 8. Although different modes of constituting juries might be suggested, it

would be advantageous to modify the system, though founded on precedent, if it could be thereby rendered efficient. The suggestion to form the juries entirely of members of the country in which the Exhibition is held is not desirable, as it would deprive the Exhibition of much of its international character, and exclude that co-operation and intercourse between eminent men of different countries which forms a most interesting and striking feature.

WHITBY, BROTHERS, Exhibitors, Class XXVIIc.—1. Undesirable. 2. *a.* Because the expectation of a prize encourages exhibition by dealers rather than actual producers. To the former the prize and its advertising value are the main object; to the latter they are of no importance, but the knowledge that they are equally attainable by himself and the general dealer (who may employ them to his actual disadvantage), destroys his faith in the professed objects of the Exhibition, and disinclines the manufacturer and producer from connection with it. *b.* The consequent division of the exhibitors into two classes, those who are mainly desirous of assisting to carry out the original scheme of "Exhibition," and those who show for their own personal advantage. *c.* The impracticability of obtaining a jury which is qualified and impartial; the interests of the two classes of exhibitors referred to not being identical. *d.* Because, presuming the award to be impartial, infallible, adapted to introduce "meritorious productions to the notice of the public," and of equal real value to all classes of exhibitors, it could not be made in favour of one without injury to others. 3. Works of fine art and designs are peculiarly unfit to be the subjects of competition for "prizes," because there is no indisputable standard of taste in such matters, and exhibitors would not be willing to accept the judgment of any critic or jury. An award of merit should be superfluous if proper precautions are taken to exclude meretricious productions from the privilege of exhibition. 4 and 5. Object to the constitution of juries by any means or on any conditions, but suggest a reference to the working of those appointed by the Agricultural Societies. Believe that the jurors there are kept in ignorance of the ownership of the objects submitted to them. This regulation could not be enforced in International Exhibitions, but it shows the impossibility of obtaining a reliable and impartial verdict, for even after this precaution the awards are practically little regarded, especially those for machinery, which offers the best parallel to the contents of International Exhibitions. 6. Yes; on production of reasonable evidence of oversight or error, not on general grounds of dissatisfaction. If the principle of awards be recognised it must be supported. 7. Think awards unnecessary as well as undesirable. The public are the best judges of their own requirements, and are not slow to discover and appreciate real merit. They are as likely to be misled as to be assisted by any efforts to guide their judgment; and more likely to challenge than to respect the decisions. Refer for confirmation to the public comments in recent instances. 8. Suggest, especially in the industrial departments, the strenuous encouragement of actual producers as exhibitors.

GEO. FERGUSSON WILSON, F.R.S., Juror, Class IVa.—1. Believes "awards of merit" necessary to the success of international exhibitions. 2. Had seen enough of the difficulties in awarding the medals in 1851 in London, and in 1855 in Paris, to make him join this year's jury with a very doubtful feeling as to prizes; what he saw during the work, however, satisfied him that the present one medal and commendation system worked very tolerably well. Had afterwards several conversations with foreign jurors on the subject, who gave it as their opinion that their compatriots would not exhibit were there no prizes. Believes exhibitions held in England are supported in great part by those who utterly dislike them, and who would gladly escape the trouble and expense of exhibiting, but dare not be unrepresented. Believes that exhibitions without prizes, however much credit the arti-

cles exhibited might gain from the actual visitors, would not sufficiently answer the exhibitor's purpose. The value of a medal to a manufacturer is greater abroad than at home, and the value at home continues after the exhibition is closed; placed on the heading of his invoices and on labels on his goods—it carries a sort of prestige of merit. On the whole, he thinks the present system of limited medals works fairly well; that it would have been much better had it been possible to have the three grades of medals—the great gold, the gold, and the ordinary medal—so as to stamp the degrees of merit, but that, at least with “mixed” juries, the immense difficulties of arriving at just decisions on comparatively fine points, out-weighs the good, and that the present system of awarding medals to every thing of decided merit, though it involves giving so many medals that they convey no distinction to the heads of industries, yet gives a rough sifting which is some guide to the public, and satisfies exhibitors sufficiently to make them go on exhibiting; and that as exhibitions, with all their short-comings, do, as a fact, lead to great advance in manufactures, this is the main object to be arrived at. 4. Cannot. 5. Thinks it most important to choose as jurors men who have seen something of previous exhibitions, as otherwise, however well qualified they may be by scientific or technical knowledge to form correct judgments, they have much greater difficulty in acting satisfactorily with their colleagues, more especially with foreign ones. 6. Does not think good men would serve as jurors, if their awards were liable to reversal. 7. Does not think awards undesirable. 8. Thinks the very greatest care should be taken to get the best possible reporter to each class, and to have the fullest possible report. In the industry the writer knows best (the stearic acid candle manufacture), he can speak to the fact that the reports, both of the Exhibitions of 1851 and 1855, have been of the greatest practical use, leading to many improvements in manufacture—directly, by the knowledge they themselves promulgate, and indirectly, by serving as text books to writers of treatises on manufactures, both abroad and at home. Thinks clearer rules might be laid down as to what class of objects are qualified for medals and what for honourable mention; in his section of Class IV. there was a rule that articles such as raw or almost raw products from the colonies, though excellent, as they had not involved any considerable degree of skill or manufacture, could only have honourable mention; in other sections, believes other rules existed.

H. DRUMMOND WOLFF, Commissioner for the Ionian Islands.—1. Most assuredly. 2. It is easy to understand that, in a large country like this, a medal is but of small advantage, especially to great producers. The standard of merit for a medal is comparatively a low one. Merit above that standard is waste. The works exhibited by great firms are too far above it to make the medal of any value to a reputation already established. This class of producers would, therefore, prefer to trust to the report of a jury, to the press, or to public suffrage. Their goods are sought for by the highest classes of the most civilised communities. It is clearly for these no object of ambition to obtain a medal that may seem almost to reduce them to the lower level of producers exhibiting articles immeasurably inferior. But the question is very different for small producers in small countries. In the Ionian Islands the news of the awards has not only given the most lively satisfaction, but has wrought a sensible and immediate benefit. It has forced on the producer, by palpable evidence, the belief that his productions possess some value. It has thus already given an impulse to industry and enterprise with a rapidity and efficacy which no written report could achieve. In great countries there exists a public opinion and a public press. These institutions do not extend to smaller communities. Reports of juries, even if translated into every living dialect, would be read and appreciated only by nations in an advanced condition of civilisation. In various countries the producer himself, a small cottier, often cannot read. Such is

the case with many of our Ionian producers who have obtained medals. If, by some chance, the producer himself can read, his customers and neighbours do not boast that acquirement. A medal tells its own story to every one, lettered or unlettered. In the Ionian Islands the medals will be handed down as heirlooms, and will fix the date of a first and not unsuccessful competition in the arena of human industry. It will turn the reluctance to exhibit hitherto shown into eagerness and emulation. The object of international exhibitions is to bring forward new industries and to open fresh markets, quite as much as to reward and stimulate arts and trades already successfully established. This object would be wholly lost, especially in colonies or in backward communities like those of the East, if acknowledged merit were not to obtain some indisputable token of recognition. 3. See answer No. 8. 4. Can suggest no better method. 5. The juries should be composed entirely of persons unconnected with trade. At the present day amateurs can be found competent to form a sound judgment on branches of industry, however scientific. Experts might be added as assessors, but without a vote; nor should they be present during a division. The juries should be smaller in number, and their labours should extend over a longer period than that allotted to them on the present occasion. Notices of their meetings should be posted at different points in the Exhibition building, and no object should be examined without the presence of the exhibitor. 6. Only in favour of an exhibitor whose works have been accidentally overlooked. 7. Would substitute a smaller medal for the honourable mention. 8. While he maintains the opinion that awards are indispensable to the utility of an international exhibition, the present system appears open to great improvement. The chief objection to a gradation of awards lies in the invidious nature of the task thus devolving on the jurors. To this it may be replied, that jealousies are created by the distinction established between “medal” and “honourable mention,” and that, nevertheless, a further gradation has been introduced by some of the juries by adding the term “high commendation” to the award of a medal. But if jealousy be anticipated from the classification by the judges of the products submitted to them, this feeling could hardly be raised if the classification were effected by the exhibitors themselves. As in universities candidates enter themselves for particular prizes, so should exhibitors be called upon to declare beforehand in which class they intend to compete. Of these classes there should be three, each with its medal (gold, silver, and bronze), and with its “honourable mention,” or smaller medal. By this method a producer would be satisfied with the species of award allotted him, as not competing with exhibitors eminently superior or inferior to himself. The details of such a plan, though too long for the limits of suggestions like the present, might be reduced to simplicity. This answer includes that to query No. 3. Though the allotment of awards to works of Fine Art and Design is of questionable policy, and in the case of great masters absolutely impossible, the writer would not exclude smaller artists and communities from the benefits to be derived from an examination by competent judges of artistic works, should the producers themselves desire it.

CHARLES WOOLLOTON, Juror, Class IIIA.—1. Yes. 2. Without some prospect of honorary distinction, or preference, it would be very difficult to obtain exhibitors, even among manufacturers, producers, or wholesale traders, who alone should be admitted to exhibit. 3. Should be admitted. 4. Cannot. 5. Was a juror in Class III, section A, and joint secretary with Baron Riese Stallburg to Class III., and from his experience on that occasion, thinks juries should be more sub-divided, have less subjects referred to each jury, and be composed of fewer members. No jury should exceed seven, nor be less than three, and if three, the decision should be unanimous. Thinks that before each juror accepts the office, he should be asked to state in writing, whether he has, in any previous

international exhibition, acted in the capacity of juror, and if not, whether he considers himself conversant with the relative merits of the goods, produce, or other objects on which he will be called upon to pronounce an opinion. 6. Thinks not.

GEORGE WRIGHT and Co., Exhibitors, Class XXXIA.—1. On the whole, undesirable. 2. Because exhibitors are mostly persons already well before the public, who, as a rule, may be relied upon as their best and truest patrons. 3. The preceding remarks apply equally to this question. 4. No; an English jury is popular, and may generally be relied upon. 5. Many improvements in their "constitution," if the juries of 1862 are referred to; but chiefly that they should be composed of persons having knowledge of, and no interest in, the matters upon which they may be called to adjudicate. To this end some system of challenging might be introduced, which, under proper restrictions, would be a great protection to the competitors. With respect to their "proceedings," if their constitution had been good, their proceedings would have been better. 6. From the decision of a well-constituted jury, probably no appeal would be necessary, except in cases of error. 7. The best way "to bring meritorious productions to the notice of the public" is to place them before the public, and let their merits speak for themselves. 8. None, except to remark that this firm is entirely dissatisfied with the awards in Class XXXI., in which it exhibited, inasmuch as the jury in this class awarded medals to parties for goods of which they were not the producers, but which were manufactured for them by one of the jurors of Class XXXI., and the president of the section in which this class is included, and whom, if any system of challenging had been permitted, this firm would never have allowed to remain upon the jury.

WILLIAM YOUNG (Young's Patent Type Composing and Distributing Machine Company), Exhibitor, Class VIIA.—1. Not if made according to the present method. 2. Firstly, because the present jury system is often very irregular, not to say partial, in its action, as the following instance will show. It is the case of an exhibitor who received no notice of the intended visit of the jury, unless an hour's verbal one, given early in the morning to his assistants in the building during his absence, can be considered such. A notice of the same kind having been given about a week before, and not having been followed by the visit, as intimated, the exhibitor in question called at the office of the jury and requested that he might receive a written, or, at all events, a timely notice of any similar intended visit; but the secretary stated, in reply, that no written notice could be given, and this, notwithstanding a rival exhibitor had received a week's written notice for that purpose, and had, accordingly, the opportunity of giving every necessary explanation to the jury, which was virtually denied to the first-mentioned exhibitor. Secondly, because awards have repeatedly and obviously failed to recognise superior merit, and have, therefore, in every instance of the kind, been unjust in their operation and injurious in their results, as tending to diminish, if not to destroy, the good effect of other awards, besides proving, perhaps, a serious obstacle to the progress of some useful enterprise, by tending to mislead public opinion on its merits. It is, however, not surprising that a system which admits of the exercise of functions, over which public opinion, from want of information, can have no control, until too late to be of any immediate use, should fail to accomplish the object in view, and be the cause of such universal dissatisfaction. It is, moreover, impossible that any body of men, however well informed, can possess all the special knowledge required to enable them to exercise their functions with every possible certainty of arriving at a just decision in all cases. It is true they may obtain the opinion of others who are practically acquainted with the subject that may happen to be under consideration, but the necessity or advantage of obtaining such counsel, is an additional proof

of the irregular and irresponsible exercise of their functions, since they can avail themselves of an authority to bias their "verdict," which is totally unknown and still less recognised by the exhibitors or the public. 8. Venture to suggest that greater publicity should be given to all deliberations affecting awards. This end would be best attained by adopting the same mode of procedure as is followed in the civil law courts; that is, a public tribunal, presided over by a judge, to recapitulate the evidence to a jury, the individual members of which, however chosen, might be challenged by any exhibitor, under examination. This method would guarantee a fair hearing to every candidate, and enable the public to form its own opinion on the merits of each particular claim, irrespective of any decision of the jury. To promote the efficient working of this plan, it would be necessary to increase the number of classes, and arrange that each should have its distinctive tribunal, which should sit permanently during the continuance of the Exhibition. It appears to me that each of these tribunals would form an additional attractive and instructive feature of the Exhibition; for many interesting questions would be discussed before them, and visitors to the Exhibition would naturally resort to them in order to obtain the most reliable information which such discussions would necessarily elicit. These industrial courts might indeed become permanent institutions of the country, where every element of progress might at all times receive encouragement, as well as a discriminating acknowledgment; and no better or more appropriate use could be made of the hall proposed to be built to the memory of Prince Albert than to devote it to the sessions and requirements of such tribunals.

The following were omitted in their alphabetical order:—

J. W. DEL CAMPO, Delft, Holland, Honorary Corresponding Member of the Society of Arts.—Has been constantly at the International from the first pile that was driven for the erection of that great undertaking until the last package that was returned to its zealous proprietor, and has attended the juries at their examination in the Dutch department. 1, 2, 4, 5. The object of exhibitions must be to compare the improvements of several products of manufactures; as the manufacturers themselves are in general too much interested in the products of their inventive minds, the Jury should be nominated of non-interested, not professional men. The question is not what the articles are made from, but what is their quality, use, utility, and price. A close examination, therefore, of every exhibited object is necessary in order to arrive at a right conclusion, where a wrong conclusion is injurious to the industry at large. Thinks there is not one who is acquainted with the working of the juries that can be of opinion that, in the limited time that was given to them, they have been able to judge correctly of many of the articles exhibited in the several classes. Many things were not examined at all; others not known to several jurors; and if that be the case, awards do more harm than good, and, for future exhibitions, the writer would propose that they should be only of a special class of objects. The jurors should have time and an opportunity to examine closely every exhibited article. An appeal from their decision should be possible, as the jurors are as liable to mistakes as any other men, and further inquiries and communications may lead to better conclusions. Rewards should then be given for those articles only which have the best commercial value and utility, to the manufacturers and not the inventors. For inventors special rewards should be given. Machines in general and engines should undergo a thorough trial; they do so in agricultural shows—why not in general exhibitions? 3. The Exhibition of Paris in 1855 has proved that awards of merit are unsuitable for the purpose. In this class there is still more confusion about the merit of a thing than in the objects of industry.

JOHN LEIGHTON, F.S.A., Exhibitor, Class XXVIII., XXXVIII., and XL.—1. Yes, if by medals in degrees of merit, and less lavish than in the Exhibition of 1862. 2. Awards to merit as incentives to exertion might be made highly beneficial both as guides to purchasers and the public. By foreign exhibitors they are greatly esteemed, and it is doubtful if they would send without some such stimulant. 3. No. Works of fine art ought not to be excluded. To give rewards to the moiety of a universal exhibition devoted to the whole arts is not just or possible. The fine and industrial arts are so blended that in many cases they are not to be separated or estranged, were such a course politic, and that certainly is not the feeling of the present day. Artists, painters, architects, engravers, and sculptors, have in many cases received reward from the international juries. This question is not one to be lightly answered by a "No," or "Yes," from exhibitors of raw materials, mechanics, manufacturers, or scientific men, but by artists and corporations of art upon mature consideration. The feeling of the British artist is decidedly against reward in the form of medals, but the opposition rests solely from the presumed difficulty of finding judges free from bias, or rather with a bias founded upon reasons clear and defined. The continental artist regards the non-estimation of medals by us as due to a fear of competition with him in a walk in which he is superior, and believes to extend to all departments of art—save perhaps water colour. 4. No; great care should be taken in the selection of jurors by the universal vote of exhibitors, they being associated with men celebrated in science and art, as a check against trade influences which are not so lofty in their aspirations. No juror to be nominated in a sub-class if an exhibitor in the class. Jurors to receive medals of office to rank as prize medals. 5. Not having the proceedings or constitutions of the juries at hand, cannot say, but would have the special commissioner an able man, well acquainted with the department in science or art over which he is placed (an exception in 1862, not the rule); he should be responsible for the legality of the awards and the process and laws by which they are governed; he should serve as reporter, and be able and willing to defend the acts of his jury upon neutral ground, responsible alone to a council of chairmen. The special jury commissioner of a class should know names from things, and indeed both; he should see that the jurors are fit, learned men, and prompt in attendance, and that they be not exhibitors in a class or sub-class of the section. A trade is often divided into sub-classes, a man competent in one division serving in another of which he knows nothing, with a hope of benefiting his connections without damaging his interests. For instance, a papermaker may know nothing of printing, and *vice-versa*, a bookbinder less of type-casting or founding, yet all are in the same class and have acted indiscriminately. 6. No; a court of appeal not desirable, though highly necessary to prevent acts of injustice and rectify errors. 7. Awards are only undesirable from their maladministration; the trade reports are meagre and biased, the medals being rewards to the exhibitors, and the reports to the jurors, instead of honour to the class products. The reports and medals should be distributed together at the close of the exhibition, prior to a fortnight's leave of sale, the special commissioner preventing the sale of goods other than those submitted to the juries; such should on no account be permitted to enter the building. As a souvenir of the event, an exhibitor's medal could be given, as in 1851. 8. In future exhibitions classification of goods ought to be attempted, and it is hoped will be in 1872, should we not be forestalled by the French in their next great gathering. Medals ought to be fewer and various in degree, awarded in less haste, with greater care, and under the supervision of special commissioners with special accomplishments.

Home Correspondence.

THE SUBMARINE TELEGRAPH.

SIR,—In the letter which you did me the favour to insert in your journal of Friday last, there occurs one error of the press, which, though apparently minute, is important as affecting the sense.

The mistake may well have arisen from the indistinctness of the original writing, and the hurry in which I wrote. The words "*gravel bottom*" in the last paragraph of my letter should have been the "*general bottom*," and the immediately preceding paragraph shows that the bottom, so far as the soundings have been completed, consists not of gravel, but of soft material, called by sailors "*ooze*."

As in the elucidation of scientific facts preliminary to action in completing our great work, perfect accuracy is important, you will oblige me by inserting this letter also to prevent any misapprehension on this point.

I am, &c.,

STUART WORTLEY.

Atlantic Telegraph Company,
22, Old Broad-street, E.C., February 16, 1863.

SPECIAL GENERAL MEETING.

SIR,—There is an error in the report of my remarks on the 7th instant, which it may be important to correct. I am made to say that the Society, since its foundation, "*had awarded no fewer than 20,000 premiums*;" I gave that as the number which had been *offered*, and observed that about one *quarter* of the number (say 5,000) had been awarded.

It may be interesting to add the following, as pretty nearly a correct classification of these premiums:—

	Premiums offered.		Premiums awarded.
Agriculture	7,206	.....	577
Chemistry	2,566	.....	129
Fine Arts	4,274	.....	2,658
Manufactures	1,447	.....	335
Colonies and Trade	3,173	.....	368
Miscellaneous	95	.....	55
Mechanics	1,289	.....	878
Totals	20,000	.....	5,000

I shall feel obliged by your inserting this in the next number of the *Journal*.

I am, &c.,

J. H. MURCHISON.

Surbiton hill, Kingston-on-Thames, 16th Feb., 1863.

To Correspondents.

ERRATUM.—In the *Journal* for the 16th January last, page 151, col. 1, line 13 from bottom, before "*awards*" insert "*no*."

MEETINGS FOR THE ENSUING WEEK.

- MON. ...R. Geographical, 8½. 1. Dr. H. Rink, of Greenland, "On the discharge of Water from the interior of Greenland, through Springs underneath the Ice." 2. Captain Millington H. Synge, R.E., F.R.G.S., "On Rupert Land."
British Architects, 8.
Actuaries, 7.
Medical, 8½. Mr. Thomas Bryant, "On the Diseases of the Osseous System, and on Tumours, &c."
Royal United Service Inst., 8½. Mr. Benjamin Sharpe, "The Errors incidental to Ships' Bow and Broadside Guns."
- TUES. ...Medical and Chirurgical, 8½.
Civil Engineers, 8. 1. Mr. J. R. Mosse, "On American Timber Bridges." 2. Mr. W. Fairbairn, "On the reconstruction of the Dinting and Mottram Viaducts."
Zoological, 9.
Royal Inst., 3. Prof. Marshall, "On Animal Mechanics."
- WED. ...Society of Arts, 8. Mr. John Cheetham, "On the Best Means for promoting the Supply of Cotton."
R. Soc. Literature, 4½.
Archaeological Association, 8½. 1. Rev. E. Kell, "On the Recent Discovery of Ancient Remains in the Isle of Wight." 2. Mr. Syer Cuming, "On Ancient Nielli."
R. Horticultural, 1. Hyacinth Show. Floral Committee, at 10. Fruit Committee, at 10.

- THURS. Royal, 8½.
Antiquaries, 8½.
Philosophical Club, 6.
Artists and Amateurs, 8.
FRI. Royal Inst., 3. Dr. E. Frankland, "On Chemical Affinity."
Royal Inst., 8. Mr. John Lubbock, "On the Ancient Lake Habitations of Switzerland."
SAT. R. Botanic, 3½.
Royal Inst., 3. Prof. Max Muller, "On the Science of Language."

PATENT LAW AMENDMENT ACT.

APPLICATIONS FOR PATENTS AND PROTECTION ALLOWED.

[From Gazette, February 13th, 1863.]

- Dated 15th October, 1862.*
2788. R. A. Brooman, 166, Fleet-street—Imp. in refrigerating and freezing, and in apparatus employed therein. (A com.)
- Dated 12th December, 1862.*
3329. J. E. Roussel, 15, Passage des Petites Ecuries, Paris—Imp. in hand and power looms for weaving. (A com.)
- Dated 16th December, 1862.*
3353. R. Schomburg, Onslow-terrace, Lorrimore-road, and A. Baldamus, Surrey-terrace, Lorrimore-road—Imp. applicable to all kinds of oils used for illuminating purposes, whereby combustion thereof is rendered more perfect, smoke prevented, and the purity of the light increased.
- Dated 20th December, 1862.*
3403. F. W. Harvey, High-street, Putney—Imp. in fitting and connecting rudders to ships and other floating vessels.
- Dated 10th January, 1863.*
89. L. H. E. Lepreux, Bordeaux, France—Improved plates or slabs for preserving apartments from the effect of damp, and which are also applicable in the composition of plinths and foundations for walls. (A com.)
- Dated 12th January, 1863.*
95. W. Clark, 53, Chancery-lane—Imp. in winding or copping frames. (A com.)
- Dated 15th January, 1863.*
137. J. P. Bath, Aigburth, near Liverpool—Imp. applicable to omnibuses and other like carriages, to adapt them for use on rail or tram roads, as well as common highways.
- Dated 20th January, 1863.*
166. A. Paul, Gwennap, Cornwall—Imp. in obtaining reciprocating motion in steam engines, and for communicating the same to any ordinary pumps, for whatever purpose they may be employed.
171. H. A. Bonneville, 24, Rue du Mont Thabor, Paris—Imp. in colouring, bronzing, and preserving iron and steel. (A com.)
173. W. Clark, 53, Chancery-lane—Imp. in looms for weaving textile fabrics. (A com.)
174. J. Smith, Berkeley-house, Seaforth, near Liverpool, and S. A. Cheese, Egremont, near Birkenhead—A new description of motive power engine.
- Dated 21st January, 1863.*
181. J. M. Kirk, Halifax—An improved method of, and means or apparatus for, finishing textile fabrics.
183. J. Holt, Oldham—Imp. in willowing and opening cotton and other fibrous substances.
185. W. Clark, 53, Chancery-lane—Imp. in preparing and obtaining photogenic pictures or representations. (A com.)
187. E. Bazin, Angers, France—An improved log.
189. Sir C. Lindsay, 11, Grosvenor-square—Imp. in apparatus to be used on railways to indicate to the engine driver of a carriage train the length of time which has intervened since the passing of a previous train.
191. N. Clayton and J. Shuttleworth, Lincoln—Imp. in rotatory screens suitable for screening wheat and other grain or seed.
193. H. Holcroft, Rue de la Grandiere, Tours, France—Improved machinery for separating substances of different specific gravities.
195. J. C. Brandes, 24, Rue Dunkerque, Paris—An improved hair creaser or divider.
- Dated 22nd January, 1863.*
197. J. Ellacot, Liverpool—Imp. applicable to spur wheels, racks, and other toothed gear to insure greater strength in the teeth.
199. R. Penney, Carrbrook, Cheshire—An improved solution or mixture for fixing certain colours employed in printing calico and other fabrics.
201. W. Clark, 53, Chancery-lane—An imp. in piston valves and other pistons. (A com.)
203. T. Lambert, Short-street, Lambeth—Imp. in "apparatus" for drawing off water or other fluids.
205. F. W. Morley, Bedford—Imp. in boilers for steam engines, and in valves to be used therewith.
- Dated 23rd January, 1863.*
207. A. Henderson, Dundee—Imp. in the preparation or manufacture of textile materials, and in the machinery or apparatus used therein.

209. C. Stopford, Bristol—Imp. in the construction of hats and other coverings for the head.
210. F. N. Gisborne, 3, Adelaide-place, London-bridge—Imp. in the means of communicating signals on board ship, and of indicating the position of the rudder.
211. W. Clark, 53, Chancery-lane—Imp. in mariners' compasses. (A com.)
213. C. Turner, Leeds—Imp. in the manufacture of felted fabrics.

Dated 24th January, 1863.

215. A. O. Glossop, Sheffield—Certain imp. in the construction and manufacture of breakfast cruet and liquor frames used in dinner and other services.
217. W. Allen, Cheadle, and W. Johnson, Newton Moor, Cheshire, —Certain imp. in machinery or apparatus for grinding or pointing the cards employed in carding engines.
219. E. Booth and G. Booth, Gorton, near Manchester, and A. Swallow, Staley-bridge—Certain imp. in the mode of fixing colouring matter on cotton, silk, wool, and other fibres and materials, and certain imp. in finishing such like and other textile fabrics and yarns.
221. W. Clark, 53, Chancery-lane—Imp. in syphons applied to draining, irrigation, and other purposes, whereby they self-suspend and resume action according to requirements. (A com.)
223. R. A. Brooman, 166, Fleet-street—Imp. in the manufacture of anvils, and other metal articles requiring hard surfaces. (A com.)
225. F. Tolhausen, 17, Faubourg Montmartre, Paris—Imp. in machines for carding fibrous materials. (A com.)
- Dated 26th January, 1863.*
226. W. F. Stanley, 3, Great Turnstile—Imp. in mathematical drawing instruments.
229. J. Fyfe, Greenock—Imp. in safety apparatus for steam boilers.
231. R. A. Brooman, 166, Fleet-street—Imp. in petticoats or crinolines. (A com.)

Dated 27th January, 1863.

232. H. H. Henson, 13, Parliament-street, Westminster—Imp. in fabrics for covering floors, walls, roofs, and other surfaces or objects, which fabrics are also partly applicable to the manufacture of waterproof articles.
233. G. Davies, 1, Serle-street, Lincoln's-inn—Imp. in preserving provisions, and in the apparatus employed for such purpose. (A com.)

PATENTS SEALED.

[From Gazette, February 13th, 1863.]

- | | |
|----------------------------------|----------------------------------|
| <i>February 13th.</i> | 2357. M. K. Angelo. |
| 2299. J. Barclay. | 2361. M. J. Haines. |
| 2311. S. A. Bell and T. Higgins. | 2396. F. H. Lefranc. |
| 2315. J. T. Oakley. | 2436. F. C. Bakewell. |
| 2321. V. F. Cleuet. | 2455. J. S. Margetson. |
| 2323. S. Boucher. | 2467. W. A. Richards. |
| 2326. J. G. Tongue. | 2513. J. Thom. |
| 2327. W. Whittle. | 2530. W. G. Rawbone. |
| 2331. J. Standish and J. Gooden. | 2655. J. Wright. |
| 2335. J. C. Schemmann. | 2768. D. Reid and C. J. Reid. |
| 2341. S. F. Griffin. | 2945. M. C. de Casteras Sinibald |

[From Gazette, February 17th, 1863.]

- | | |
|---|------------------------|
| <i>February 17th.</i> | 2421. W. Clark. |
| 2332. S. Wilkes. | 2446. W. Clark. |
| 2338. T. Clements, P. Llewellyn, J. Llewellyn, and J. W. James. | 2486. M. Smith. |
| | 2502. W. Clark. |
| 2344. W. Barrett. | 2512. J. B. Smith. |
| 2346. J. Mackay. | 2550. J. Simpson. |
| 2348. H. Twelvetees. | 2557. P. H. Whitehead. |
| 2352. W. Carwood, W. Boaz, and C. Colwell. | |

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

[From Gazette, February 17th, 1863.]

- | | |
|-------------------------------------|-------------------------------|
| <i>February 9th.</i> | 379. W. Mitton and J. Penney. |
| 349. J. C. Lupton and J. Bleasdale. | 394. W. Clark. |
| 359. D. Auld. | 396. W. Clark. |
| 368. D. Dietz. | 386. J. Green. |
| 406. M. J. Haines. | 399. W. Leatham. |
| 430. J. H. Johnson. | 481. T. Lovelidge. |
| 438. J. H. Johnson. | |
| 480. S. S. Bateson. | |
| <i>February 10th.</i> | 419. J. G. Jennings. |
| 367. H. D. Denison. | 420. E. Caplen. |
| | 423. G. Parsons. |

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

[From Gazette, February 17th, 1863.]

- | | |
|-----------------------|-----------------------|
| <i>February 9th.</i> | <i>February 13th.</i> |
| 354. W. H. Harfield. | 419. C. S. Jackson. |
| 358. G. T. Bousfield. | 438. J. Barsham. |
| 366. S. Fox. | |
| <i>February 12th.</i> | <i>February 14th.</i> |
| 380. W. M'Farlane. | 391. E. Oldfield. |
| | 403. H. J. Hyams. |
| | 618. P. Marcus. |